

PERSONALITY DETERMINANTS IN
ATTITUDES TOWARD DISABILITY

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TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENTS	ii
LIST OF TABLES	iv
Chapter	
I INTRODUCTION--STATEMENT OF PROBLEM	1
II LITERATURE REVIEW	5
III INITIAL HYPOTHESES	19
IV INSTRUMENTS	26
V METHOD	49
VI RESULTS OF INITIAL SAMPLE	63
VII RESULTS OF CROSS-VALIDATION SAMPLE	84
VIII DISCUSSION	101
IX SUMMARY	126
LIST OF REFERENCES	129
APPENDICES	140
A LETTERS TO THE STUDENTS	141
B INSTRUCTIONS TO THE RATERS	143
C INTER-RATER RELIABILITY OF SCORING THE GRANOFSKY PICTURES	147
D MODERATOR CORRELATIONS FOR THE CROSS- VALIDATION SAMPLE	154

LIST OF TABLES

Table		Page
1.	Canonical Vectors of the Initial Sample	63
2.	Nine-Variable Correlation Matrix of the Initial Sample	66
3.	Correlations Between Field-Independence and Attitudes Toward Disability	73
4.	Correlations Between Social Conformity and Attitudes Toward Disability	74
5.	Correlations Between Authoritarianism and Attitudes Toward Disability	75
6.	Correlations Between Ego-Strength and Attitudes Toward Disability	76
7.	Correlations Between Body-Satisfaction and Attitudes Toward Disability	77
8.	Correlations Between Body-Concern and Attitudes Toward Disability	78
9.	Correlations Between Social Desirability and Attitudes Toward Disability	79
10.	A Comparison of Relationships Found to Be Significant in the Initial Sample with Those Relationships Under the Same Moderator Conditions in the Cross-Validation Sample .	87
11.	Nine-Variable Correlation Matrix of the Cross-Validation Sample	91
12.	Canonical Vectors of the Cross- Validation Sample	97

CHAPTER I

INTRODUCTION - STATEMENT OF PROBLEM

In the last two decades, the field of vocational rehabilitation has made tremendous strides. With the passing of Public Law 565 in 1954, the Vocational Rehabilitation Administration was put on a firm financial and administrative foundation. Since that time, there has been a major increase in research in rehabilitation, in the number of professional specialists who work with the disabled, and in the facilities needed to care for and train disabled people.

Despite the many improvements which have occurred, several basic problems remain which interfere with the goals of rehabilitation. One which continues to exist, and which appears to be particularly resistant to change, is the negative, aversive way in which many people respond to visibly physically disabled people (those individuals whose disabilities are readily apparent, e.g., amputees, disfigured people, cripples, etc.).

It is obvious that these negative attitudes are injurious to the disabled person who is attempting to rise above or compensate for his handicap. They have been shown to be a major factor in hiring practices, as it is generally accepted that unwarranted discriminations exist in the employment of the disabled (Federation Employment and Guidance Service, 1959; Jennings, 1951; Noland and Bakke, 1949; Schletzer, et al., 1961). Rickard, et al. (1963), found that

although all disabled groups were subject to expressed prejudice from employers, some were discriminated against much more than others. The groups could be ranked according to the amount of discrimination expressed toward them.

Attitudes of non-disabled people toward the physically disabled are also of utmost importance in the day-to-day experiences which are so crucial in influencing and forming the disabled person's feelings about himself. There are countless descriptions of the frustrations which disabled people encounter, and of the self-depreciation and social withdrawal that inevitably follow (Wright, 1960; Barker, et al., 1953; Dembo, et al., 1956).

Thus, the evil of discriminatory attitudes is twofold. The disabled individual is externally hindered in his efforts to "rise above" his handicap by the vocational limits which his environment imposes and which restrict the alternatives available to him in his quest for fulfillment. He is hindered internally by the way he has learned to view himself as the result of being the object of discrimination and avoidance on the part of non-disabled people. Since he often sees himself in an unnecessarily self-depreciating and limited way, the realization of whatever true potential he might have is an extremely unlikely occurrence.

Although much has been written about the negative attitudes which are expressed toward the disabled, very few conclusive empirical studies have been found to explain their etiology. Siller (1963 a, 1963 b) has stressed the need for research into the personality factors involved in

how individuals relate to disabled people, but has bemoaned the lack of a theoretical basis from which to attack the problem. Although it is questionable whether theoretical bases are actually lacking (a thorough review of the literature would suggest the contrary), Siller's studies in this area seem to make that assumption. Granofsky (1956) also recognized that empirical studies investigating personality variables in this area were virtually non-existent. Although his major interest was in whether negative attitudes toward the physically disabled could be modified by social contact, he did make an attempt to deal with personality variables in the non-disabled. His study, which also could be characterized as lacking in theoretical foundations, uncovered no relationship between any certain personality variables and specific attitudes.

This study is an attempt to investigate and evaluate the various theories which have been put forth as explanations of discriminatory attitudes toward individuals possessing a visible physical disability. An attempt will be made not only to appraise the validity of the various theoretical approaches, but to give some indication of their relative importance and degree of interrelation. Many studies have been done attempting to establish a relationship between one variable, such as prejudice, and attitudes toward the disabled. Since it is extremely unlikely that any single variable can be cited as the determiner of negative attitudes, these studies appear to have barely scratched the surface. The present study will attempt to establish and describe interactions and interrelations among those variables which have been considered important in the dynamics of negative attitudes. This study,

then, will not only serve to evaluate the theories which have been put forth, but will hopefully result in a dynamic, rather than static, appraisal of those personality variables which play a role in attitudes toward physically disabled people.

The first step will be to review the studies which demonstrate the presence of negative attitudes toward the disabled. When this has been completed, the various theories purporting to account for this behavior will be examined.

CHAPTER II

LITERATURE REVIEW

A. Studies Demonstrating the Existence of Negative Attitudes Toward the Physically Disabled.

As early as 1921, Perrin had noted that the physical characteristics and appearance of an individual "constitute a large group of the total series of effects produced by that individual upon others."

In one of his initial studies in the area of interests, Strong (1931) found that while a mildly favorable verbalized attitude was expressed toward crippled and blind people, a more unfavorable attitude was expressed toward deaf-mutes. Although the overall results indicated generally positive verbalizations toward the disabled, there was evidence of underlying biases and hostility.

Orgel and Tuckman (1935) investigated the kinds of nicknames given to one another by a group of children living in an orphanage. They found that the nicknames given by boys referred to physical defects in 31.9% of the cases, and the nicknames of girls referred to physical defects in 30.9% of the cases. Also, practically all of the nicknames were derogatory, producing resentment.

Using college students in a study of verbally expressed attitudes toward the disabled, Mussen and Barker (1944) directed them to rate disabled people according to 24 personality traits. The data indicated that these verbalized attitudes were generally favorable. However,

once again there was evidence of generalized attitudes or biases toward the disabled, suggesting that they were being perceived in a stereotyped, often degrading, manner.

Ray (1946) supported this finding of generalized public attitudes in a study in which high school students served as subjects. The subjects were asked to rank photographs of six college men according to a list of behavioral personality traits. Half of the group was presented with a photograph of an individual in a wheelchair; the other half was presented with the same photograph with the wheelchair blocked out. The results indicated that disabled people are perceived differently (in a stereotyped manner) than non-disabled persons, i.e., they are judged to be more conscientious, to feel more inferior, to be more unhappy, etc.

In a study involving social distance, Rusk and Taylor (1956) found that 65% of 50 college students would not marry a person with an amputated leg, and 50% would not date such a person. Also, 85% would not marry, and 72% would not date a deaf person.

Himes (1960) supported Rusk and Taylor's findings in a study in which the Bogardus Social Distance Scale (Bogardus, 1927) was adapted for use with blind students and collegiate normals. He was able to show that the more intimate the proposed relationship with a blind person, the more clearly and intensely he is rejected by his normal counterpart.

Using sociometric choices and lists of positive and negative traits, Force (1956) found that physically handicapped children were not as well

accepted as normal children. The degree of disability was less important than how the various disabilities were perceived by the normal subjects.

In summarizing this group of studies, Barker and Wright (1954) state that although public, verbalized attitudes toward the disabled may be mildly favorable, an appreciable minority will openly express negative attitudes, and a majority of individuals will reveal them indirectly.

These studies have indicated the presence of underlying negative attitudes toward disabled people. The various authors have not attempted to explain their findings, only to show that these feelings exist. The next group of studies will focus on attempts to explain why these attitudes exist. Also, studies which support or contradict the various hypotheses will be presented.

B. Theoretical Approaches Attempting to Explain Negative Attitudes Toward Disability.

1. Theories and studies attributing negative attitudes to inconsistencies in the non-disabled's perceptual field. The first attempt to understand why non-disabled people react in a negative manner toward disabled people was made by Winkler (1931). He proposed that, because of the unusual postures and movements of the crippled, such a person serves as a strange, disturbing emotional stimulus. The behavior aroused is that of suspicion and aversion, since there is little possibility that the physically normal individual can establish an empathic relationship with him. Winkler tested his hypothesis by displaying

actions pictures of healthy and disabled persons to 200 physically normal subjects who were to judge the pictures with respect to character and personality traits. Significantly more unfavorable judgments were made of the pictures of disabled children, even though some of these were not consciously recognized by the subjects as being disabled.

Schauer (1951), on the basis of psychiatric observations, felt that it was the novel sight of a blind person which aroused fear in normal people, thus lending some support to Winkler's views. He stated that vague feelings of something "not being right" were the source of the fear.

In his theoretical framework involving neurophysiological concepts, Hebb (1946) has attempted to explain fear responses to strange objects and persons. His explanations remind one of Winkler's previously described hypothesis. He postulates that a fear response occurs when an object is seen which is like familiar objects in enough respects to arouse habitual processes of perception, but in other respects arouses incompatible processes. As in Winkler's theory, the inconsistency between expectancy and experience arouses fear, avoidance, and rejection. The emphasis is on the effect of the individual's perceptual field on his behavior. Personal responsibility for behavior is minimized, as the individual is seen as a somewhat passive victim of the field. Neither Hebb nor Winkler, however, is able to explain the individual differences in reactions to the disabled, i.e., why some non-disabled people are negatively affected by the visibly disabled, whereas others are not, or at least, are affected in different degrees.

Another theoretical approach which is consistent with those of Winkler and Hebb is that of Heider (1958), who contends that the negative impact of visibly disabled people is the result of dissimilarity or unfamiliarity. He argues that the novel or different is experienced as not fitting the structure of the matrix of the life space, as not fitting one's expectations.

2. Studies and theories attributing negative attitudes to cultural conformity. Several theorists have contended that attitudes toward the disabled are culturally determined. Hanks and Hanks (1948), holding this view, have outlined five status categories in which certain disabled have been observed in various societies. These are: pariah, economic liability, tolerant utilization, limited participation, and laissez-faire.

Investigating 27 cultures, Jaques (1960) found that socioeconomic factors play a major role in treatment of the disabled. Disabled persons received protection in societies characterized by more predictable sources of livelihood, such as herding and agriculture, as opposed to societies dependent on fishing, hunting, or gathering. Mobility was another factor in the treatment of the handicapped, with disabled persons receiving protection in the more stable societies.

Kolb (1959) recognized the importance of cultural attitudes in a review of body-image disturbances by stating that a satisfactory social adaptation among those with bodily defects depends more on cultural dictates than upon the presence of the impairment.

MacGregor and Schaffner (1950) attribute much of the motivation of

patients requesting plastic surgery to cultural factors. They state that most patients either wish to conform to cultural standards of physical beauty, to correct a deformity which might handicap social and economic achievement, or to eliminate a socially perceptible trait which may produce negative pre-judgments of their character or personality. The ability of physical traits to influence people's judgments of personality has been described by Wright (1960), and labeled "spread."

Richardson, et al (1961), found a consistent preferential order when children were asked to rank pictures of other children with physical disabilities. This order was stable across various subcultures, seemingly determined by the broader cultural context.

This finding (that the pervasive cultural context is the important determiner of reactions to disability), was indirectly supported by Dow (1965), who found that social class was not a significant factor in the conditioning of negative attitudes. He had hypothesized that the reaction to disability was conditioned by the relative emphasis attached to physique, and that this varied inversely with social class level. Thus, the lower class would be expected to react more severely to physical impairment than would the middle or upper classes. His hypotheses were not supported by the data, i.e., there was no significant class bias.

Trippe (1959) suggests that present cultural attitudes toward the handicapped stem from earlier periods when such persons were a threat to society. They could not produce goods or services, and reduced the availability of already scarce necessities of life without themselves contributing any material help to society.

Greenmum (1958) and Handel (1960) have attributed negative attitudes toward the deaf and blind, respectively, to current cultural beliefs, standards, and values. These cultural norms are particularly important in the development and encouragement of stereotyping. Cowen and Cowen (1964) found cultural differences in the attitudes of college students to blindness and deafness, American students being more favorable to the blind while French students were more favorable toward deafness.

3. Theories and studies attributing negative attitudes to authoritarianism. Another group of theorists and researchers holds that disabled people constitute a minority group. Like most minority groups, they are subject to authoritarian attitudes (primarily manifested as prejudice), are related to in a negative manner, and arouse hostility and threat in certain members of the population. Dembo, et al., explain that if a non-disabled's normal physical state is to be of value to him, it is necessary for the abnormal physical state of the disabled to be of lesser value. This process is termed "devaluation." Through the devaluation process, the disabled person is seen as being of less value, and consequently is rejected by himself and others.

Gellman (1959, 1960) stresses prejudice as the source of rejection of the disabled. He contends that this prejudice is a result of social norms and customs, child rearing practices stressing health and normalcy, and the non-disabled's own fear of being handicapped. Discriminatory actions on the part of the non-disabled are classified into three groups: (1) acquiescence to group standards, (2) displaced reaction to frustration,

(3) alleviation of personal fears and insecurities.

Cowen, et al. (1960), in developing an Attitudes Toward Blindness Scale, found that negative attitudes toward blindness correlated significantly with anti-minority, anti-Negro, pro-authoritarian attitudes. Expanding Cowen, et al.'s study to include disability in general, rather than limiting it to blindness, Christie, et al. (1958), were unable to provide support for the previous finding. No significant correlations were found between the California F. Scale (Adorno, et al, 1950) and the Attitudes Toward Disabled Persons (ATDP) Scale (Yuker, et al., 1960).

On the basis of these studies, it would appear that blindness is subject to authoritarian attitudes, but that disability in general is not. One must question, however, whether something as diverse and vague as "disability," which can range from the incapacitating to the minute, and from the visible to the invisible, can be adequately measured in an objective, uni-dimensional scale. Bell (1962), and Siller and Chipman (1964) have previously raised this question. This problem will be dealt with in greater detail in Chapter IV (INSTRUMENTS), since the ATDP will serve as one of the criterion instruments in this study.

Granofsky (1956) tested the hypothesis that negative attitudes toward the disabled were a form of prejudice, but that they could be modified by social contact. He found that when attitudes were negative prior to contact, eight hours of contact with disabled people did not significantly modify them. In this study, the author developed a

Pictures Test to measure attitudes toward the disabled. Since it will be utilized in the present study for that purpose, it will also be described in detail in Chapter IV.

Somewhat contradictory to Granofsky's findings but consistent with his hypothesis, Bateman (1962) found that contact and interaction with blind children raised sighted children's ratings of them. Also, Wolman (1958) found that blindness did not prevent a child from being accepted by his sighted peers.

Rickard, et al. (1963), developed a social-distance scale to measure prejudice toward disabled applicants for employment. All disabled groups used in the study were found to be subject to expressed prejudice. The disabilities could be ranked in terms of amount of prejudice expressed toward them.

Whiteman and Lukoff (1962) found evidence for the stereotyping of blind people, i.e., seeing them as possessing certain traits, abilities, and gifts. In a previous study Lukoff and Whiteman (1961) had found that the term "blind people" encouraged negative stereotyping, but "blindness" did not. There was a strong readiness to perceive blind people as unhappy and lacking in independence.

Jordan (1963) prefers "disadvantaged group" to "minority group" as a description of the physically handicapped. Although he does present a valid argument for his point of view, he admits that prejudice is expressed and discrimination practiced toward the physically disabled.

Very probably the most in-depth explanation of the dynamics involved in prejudice toward visibly disabled people is given by Adorno,

et al. (1950), who states:

The fact that the authoritarian person's helplessness as a child was exploited by the parents and that he was forced into submission must have reinforced any existing antiweakness attitude. Prejudiced individuals thus tend to display "negative identification" with the weak along with their positive though superficial identification with the strong. (Pg. 387.)

His orientation in interpersonal relations is thus toward getting power by associating with the powerful and influential, or at least toward participating in the power of those who have it. Admiration for the strong and contempt for the weak accompany this attitude. High scorers show predominantly what may be called hierarchical conception of human relationships whereas those who score low conceive of an equalitarian mutuality in such relationships. (Pg. 413.)

Rusalem (1950), Koenig (1949), and Dubrow (1965) hold essentially the same view as Adorno, et al. Chesler (1965) has provided empirical evidence supporting the above theoretical approach, i.e., that physically disabled people are subject to prejudice (which he defines as attitudinal and behavioral predispositions) in much the same way as are ethnic minorities. He constructed an Intergroup Relations Scale, which is a modification of the Anti-Semitism Scale (Levinson and Sanford, 1944) and the Negro and Minority Subscales of the California Ethnocentrism Scale (Adorno, et al., 1950), and found that it correlated $-.52$ with the ATDP. The ATDP correlated $-.45$ with the Race subscale, $-.40$ with Religion, $-.43$ with Nationality, and $-.46$ with Social Class, all of which were significant at the $.01$ level.

4. Theories and studies attributing negative attitudes to a lack of ego-strength. Siller (1959, 1962, 1963a, 1963b) believes that the degree and fixity of the individual's balance of self to object cathexis

is a major determinant of reaction to personal disability and the disabled. This balance is represented in his theory by degree of ego strength. Thus, a positive self-image and attainment of stable object relationships are necessary for the acceptance of the disabled. Conversely, low ego-strength, poor self-acceptance, insecurity, and anxiety are negatively related to acceptance of disabled people.

In attempting to verify this theory, he administered the Attitudes Toward Disabled Persons (ATDP) Scale, the Gough Adjective Checklist, his own Social Distance Scale and Feeling Checklist, and several other scales. Although his results are fairly vague, he did find that college subjects are more accepting than non-college subjects. There were trends indicating that security, affiliation, and ego-strength are positively related to acceptance of the disabled. Siller also felt that his data lent support to the hypothesis that a negative self-image and disturbed object relations are conducive to an aversive reaction to the disabled.

Although it was completed before Siller began his work, a study by Steingisser (1954) does lend support to Siller's general hypothesis. He found that individuals who were well adjusted (as measured by a discrepancy between ideal and actual self) had more positive attitudes toward the blind than a poorly adjusted group.

5. Theories and studies attributing negative attitudes to body-anxiety and concern. The fifth group of theories and studies which attempt to arrive at some explanation of negative attitudes toward the disabled are those which are concerned with the body feelings, concepts,

and/or image of the non-disabled. That is, the theorists of this point of view believe and attempt to show that non-disabled people react negatively to visibly disabled people because of problems related to their own bodies. In the classic treatise on body-image, Schilder (1950) contends that a disabled person's physical difference creates uneasiness because it does not fit with a well-ordered body image. A person's unconscious body image may be threatened by the appearance of someone with a deformity or missing part, since he identifies to some extent with this person. He states:

It is obvious that interest in particular parts of one's own body provokes interest in the corresponding parts of others. Between one's own body and the bodies of others, there exists a connection. (Pg. 225.)

There is a continual interchange between our own body-image and the body-image of others. What we have seen in others we may find out in ourselves. What we have found out in ourselves we may see in others. (Pg. 227.)

Menninger (1949) states that unconscious awareness of one's self as a complete unit includes a belief that all parts of the body are sound and function normally. Since the loss or the crippling of a part of the body signifies not only a physical wound but also a significant psychological wound, the sight of a disabled person evokes an image of this loss, thus constituting a threat to the non-disabled person.

In orthodox psychoanalytic theory, the castration complex is cited as the explanation of the negative, hostile reactions to visibly disabled persons. Maisel (1953) states that the loss of any part of the body, or the sight of such a loss, may stir up archaic castration

fears. The Oedipal taboo is recalled, along with the father's potential revenge--that of cutting off or mutilating the phallus.

Several studies have attempted to investigate the body-image of the non-disabled as a factor in rejection of the disabled. Masson (1963) attempted to find whether the definiteness of the non-disabled's body boundaries was related to acceptance or rejection of the visibly disabled. Using the Fisher-Cleveland (1958) system of obtaining body barrier and penetration scores from the Rorschach, he hypothesized that persons with vague, indefinite body boundaries would be less accepting and would manifest greater anxiety concerning the disabled than would persons with definite, firm boundaries. Acceptance and rejection of the disabled were measured by subjects' responses to the Granofsky Pictures, a TAT-like instrument in which visibly disabled people were depicted. His hypotheses were not supported. As was stated earlier, this instrument will be dealt with in much greater detail in Chapter IV, as it is intended to serve as one of the criterion instruments in the present study.

Kaiser and Moosbrucker (1960) demonstrated empirically the relationship between attitudes toward disabled people and concomitant physical reactions in the non-disabled by correlating the ATDP with GSR reactions to photographs of the disabled. They found that physically normal college subjects scoring more than 1 standard deviation below the mean on the ATDP showed more extreme GSR reaction to the photographs than did subjects scoring more than 1 standard deviation above the mean.

Centers and Centers (1963b) investigated whether the presence of

amputation represents a threat to the bodily integrity of the non-amputee. They found that peer group children expressed more rejecting attitudes toward amputee classmates than toward non-amputee classmates. Also, the amputee children were often considered the saddest children in the class. The same authors (1963a) found similar results with parents of malformed children. There were substantial correlations between responses to their children's bodies and responses to their own bodies on the part of the parents of these children. Little or no correlation in this respect existed for parents of normal children.

Epstein and Shontz (1962) investigated the relation between body satisfaction and dissatisfaction, as measured by Secord and Jourard's Body-Cathexis Scale (1953), and attitudes toward the disabled. The authors of this study constructed their own test to measure "vital interpersonal relationships" between non-disabled and disabled persons. They found that satisfaction with one's own body was related to acceptance of the disabled.

CHAPTER III

INITIAL HYPOTHESES

On the basis of the literature review, there seem to be five major personality constructs, each representing a distinct theoretical approach, which have been considered to be of primary importance in attempting to explain negative attitudes toward the physically disabled. From each theoretical position a hypothesis can be generated stating a relationship between any one personality variable and attitudes toward physically disabled people.

These five initial hypotheses are over-generalized and admittedly predict nothing about the interrelations or dynamic interaction of the personality variables which contribute to the formation and existence of the negative attitudes. Their primary value is to provide a frame of reference from which these interactions can be investigated.

Thus, the initial sample of subjects will be tested on the basis of these five general hypotheses. In analyzing the data, more subtle relations between the various predictors and the criterion will be noted. The interrelations which are found will provide a basis for the subsequent refinement of hypotheses and cross-validation of the initial findings.

The procedure will be explained in more detail in the METHOD section. Let it suffice for now to present the initial hypotheses which are based on theoretical positions stated in the literature and

which provide a means for investigating more thoroughly the components of attitudes toward the disabled.

These initial hypotheses will be presented in the same order in which the corresponding theoretical positions were presented in the literature review section.

A. Hypothesis 1--The Field-Dependency Hypothesis.

The first theoretical approach purporting to account for the negative feelings and attitudes which many non-disabled people have toward the visibly physically disabled is that which attributes this behavior to the inconsistency between the non-disabled's expectation and his actual experience. Thus, because of the somewhat strange, unusual sight of a disabled person, the non-disabled's perceptual field (and current experience) is in disagreement with what he has come to expect on the basis of his everyday experience. As a result, he is unsure how to react to what he sees, the confusion leading to anxiety and aversion on his part.

This approach is represented by such diverse theories as those of Hebb (1946), Winkler (1931), and Heider (1958), which have the basic communality of emphasizing the effect of the incongruity of the individual's perceptual field on his behavior. It seems that these theories are all dealing with, although from differing viewpoints, the concept of field-dependence. Witkin, et al. (1954), have defined field-dependence as the manner of relating to or construing the environment in such a way that the individual's behavior is determined almost exclusively by

his perceptual field. There is extensive investment in the field, and behavior is strongly affected by environmental context.

Field-dependent people have been described as being more attentive to the appearance of others, and tend to be better at recognizing people they have seen only briefly before (Witkin, et al., 1962). This hypothesis is supported by the studies of Konstadt and Forman (1965), Crutchfield, et al. (1958), and Messick and Damarin (1964). They express "impressions" of others in terms of physical features and gross behavior rather than in terms of personality characteristics. Thus, the amount of psychological disturbance aroused by a visibly disabled person might be a function of the extent to which the individual in which the disturbance is aroused is field-dependent. Individuals who are able to function with relative freedom from their environment should not be as strongly affected by an inconsistency in this environment as would individuals whose frame of reference is external and whose behavior is largely determined by the environment.

B. Hypothesis II--The Cultural-Conformity Hypothesis.

A second approach toward explaining negative attitudes toward the disabled deals with the concept of cultural conformity. Irrational feelings and attitudes, according to this point of view, are a function of conforming to the prevailing attitudes of the society. Kolb (1959), Trippe (1959), Jaques (1960), and Hanks and Hanks (1948) are among those who would contend that negative attitudes toward the disabled are the result of the emphasis in our society on such things as physical

beauty, health, wealth, and the value of work.

Individuals who tend to conform to society's rules, conventions, attitudes, values, etc., would, therefore, be predicted to react negatively to visibly disabled people, since this is passively condoned by the values of our culture. Those people who are not as unquestioning or conforming would not be predicted to behave as aversely toward the disabled, since they do not feel as strongly the need to behave in a manner consistent with society's conventions.

C. Hypothesis III--The Authoritarianism Hypothesis.

Dembo, et al. (1956), Gellman (1959, 1960), and Adorno, et al. (1950) are most representative of the third group of theorists--those who would attribute negative attitudes toward the disabled to the dynamics of authoritarianism. Since the disabled people are a minority, and are visibly associated with "the weak," they arouse hostile, negative reactions in people who, in order to enhance themselves and maintain psychological equilibrium, must associate themselves with "the strong," the successful, and the majority.

Thus, these theorists would contend that individuals who are highly authoritarian (ethnocentric, anti-minority, power-oriented, etc.) would react in an irrationally negative, hostile manner toward visibly disabled persons. Individuals who could be described as equalitarian, or who are not as authority-oriented, would not be as threatened by "the weak" or the minority that disabled people represent. Therefore, there should be a minimal arousal of hostility, devaluation, and aversion on

their part.

D. Hypothesis IV--The Ego-Strength Hypothesis.

Siller's (1959) theory of ego-strength as the crucial factor in acceptance of the visibly disabled people is typical of the fourth theoretical approach attempting to account for negative reactions toward them. He contends that an individual with satisfactory ego-strength (stable object relations, a positive self-image, minimal anxiety, a sense of security) will be acceptant of visibly disabled people. Conversely, people with negative self-images, feelings of insecurity, etc. would, through what Siller terms narcissistic regression, react negatively toward disabled persons.

The depth of this narcissistic regression is supposedly dependent on the balance of self to object cathexis in the individual. Attitudes become more negative as the regression becomes deeper.

E. Hypothesis V--The Body-Concern Hypothesis.

Finally, there are those theorists who feel that the body-image and body-feeling of the non-disabled are of utmost importance in their attitudes toward the disabled. Schilder (1950), and Menninger (1949) are the leading proponents of this point of view. These theorists would hold that individuals who are high in body preoccupation and anxiety (thus investing a large amount of energy, attention, and interest in their bodies) should attend to and be more affected by the sight of a disabled person than an individual who is not as body-oriented.

Since it is not as likely that body anxiety or conflict would be aroused in the less body-preoccupied person, he should not be as threatened by a visibly disabled person, and thus should be more acceptant of him than an individual with high body-preoccupation. Also, individuals who are low in body-satisfaction would be less acceptant of the disabled than persons who are highly satisfied with their bodies. Since people who are highly satisfied with their bodies have been found to be more secure (Jourard and Secord, 1955 ; Secord and Jourard, 1953) than those who are low in satisfaction, it is reasonable to predict that they will feel less threat and less need to reject and avoid disabled people.

In summary, there are five initial hypotheses being tested in this study. They are:

- (1) Negative attitudes toward visibly physically disabled people are a function of the extent of field-dependence on the part of the non-disabled. The more field-dependent an individual is, the less acceptant of the disabled he will be.
- (2) Negative attitudes toward physically disabled people are a function of the need for social conformity on the part of the non-disabled. The more willing an individual is to acquiesce to the conventions and values of society, the less acceptant of the disabled he will be.
- (3) Negative attitudes toward the disabled are a function of the extent of authoritarian attitudes on the part of the non-disabled. The more authoritarian an individual is, the less acceptant of

the disabled he will be.

(4) Negative attitudes toward physically disabled people are a function of the degree of ego-strength on the part of the non-disabled. The less ego strength an individual possesses, the less acceptant of the disabled he will be.

(5) a. Negative attitudes toward physical disability are a function of the degree of conscious body-satisfaction possessed by the non-disabled. The less satisfied he is with his own body, the less acceptant he will be of the disabled.

b. Negative attitudes toward physical disability are a function of the amount of unconscious concern and anxiety the non-disabled person harbors for his own body. The more somatic anxiety and concern that are present, the less acceptant he will be of the disabled.

To repeat what has been stated earlier, and perhaps clarify this somewhat, these initial hypotheses will serve three main purposes. First, by testing these hypotheses it will be possible to evaluate the relative validity of each of the five theoretical constructs and their respective approaches as an explanation of negative reactions to disabled people. Secondly, some measure of the interrelation of the predictor variables will be forthcoming. Finally, and most importantly, they will provide a vehicle for investigating the more subtle relations between the predictors and criterion. This will make it possible to formulate more specific hypotheses and determine and predict how these variables interact to produce negative attitudes toward physically disabled people.

CHAPTER IV

INSTRUMENTS

Each of the theoretical approaches, and related hypotheses, emphasizes the importance of a particular personality construct in the formation and existence of negative attitudes toward the physically disabled. Thus, there are five independent variables, or predictors, and one dependent variable, or criterion. This section will describe, and provide pertinent data on, the instruments used to measure these variables. They will be presented in the same order in which their related hypotheses and literature were presented.

A. Predictor Instruments.

1. Field-Dependence. In this experiment, field-dependence was measured by the Barrett-Frutcher Chair-Window Test (Barratt, 1955). This test is actually constructed to be a measure of field-independence rather than dependence. It is a paper-and-pencil test of 32 items in which the subject's task is to determine through which of the five windows one would have to look to see a chair from the angle shown in each picture. The subject's score is the number of items to which he responds correctly. Thus, scores can range from 0 to 32, the higher scores indicating field-independence.

Barratt (1955) reported a reliability coefficient of .89 with this instrument. The type of reliability was not reported. Young (1959)

found that the Chair-Window Test correlated $-.49$ with Jackson's Embedded Figures (a short form of Witkin's original test) and $-.35$, $-.33$, and $-.48$ with three forms of the Rod and Frame test of Witkin. All coefficients were significant at the $.01$ level.

These negative correlations were predicted since high scores on Witkin's instruments are indicative of field-dependence whereas on the Barratt-Fruchter they indicate field-independence. The Barratt-Fruchter is particularly valuable because it can be administered to groups, and unlike the majority of Witkin's tests, does not require extensive equipment.

2. Social Conformity. Bass' Social Acquiescence Scale was used as a measure of social conformity (Bass, 1956). This is an instrument composed of 56 statements in the form of proverbs, adages, sayings, etc., to which subjects are to indicate whether they agree, disagree, or are uncertain about each statement. Since the individual's score is equal to the number of times he has indicated agreement, scores can range from 0-to 56, with the higher scores indicating social acquiescence or conformity.

Bass defines social acquiescence as the tendency to agree with or to accept a wide variety of generalizations. An individual who obtains a high score is described by Bass as "outward-oriented, unsensitive, none-intellectual, socially uncritical--and unquestioning conformer to social demands placed on him."

In Bass' original study of this scale he reported a split-half reliability of $.92$ with 100 college students. The proportion of 300

proverbs accepted by a subject was used as a gross measure of the criterion against which the final, 56-item scale was developed by item analysis. Two hundred college students were ordered according to these criterion scores. The performance of the upper 25% of the subjects was contrasted with that of the lower 25% on each of the 300 statements. Fifty-six items emerged which were accepted by at least 40% more of the upper than of the lower criterion group.

In the same study, Bass reported that Southern salesmen, who are most likely to display Fromm's 'marketable personality,' show more social acquiescence than any other group (Southern college students, Midwestern college students, Northern salesmen). Also, Southern College students, who are considered to be more readily acceptant of the traditional and conventional, had a greater tendency to acquiesce than Midwestern students.

Shaw (1961) found that the Social Acquiescence (SA) Scale correlated positively and significantly with the F Scale and the Individual Prominence scale. There was a significantly negative correlation between the SA scale and the Concept Mastery Test.

Producing additional data for the validity of this scale, Fisher (1964), with 49 men and 49 women subjects, found a significant, positive correlation between the SA scale and religiosity. The Religious scale of the Vernon-Allport-Lindzey study of values, self-ratings of religiosity, and frequency of church attendance were taken as indices of religiosity.

3. Authoritarianism. Authoritarianism was measured by means of

the California F scale (Adorno, et al., 1950). This scale came about as the result of an attempt to measure prejudice without appearing to have this aim and without mentioning the name of any minority group.

The F scale is a 30-item, Likert-type scale on which the subject indicates the degree to which he agrees or disagrees with each item on a 6-point continuum. Responses can range from "strong support" (+3) to "strong opposition" (-3), with higher positive scores indicating increasing authoritarianism. These responses are converted into scores by a uniform scoring system, ranging from a score of 1 for -3 to a score of 7 for +3. The number 4 is assigned when an item is omitted. The sum of an individual's scores on the single items is then divided by 30 (number of items on the scale) to arrive at one overall score for each person on the scale. Scores may range from 1.00 to 7.00.

Adorno, et al. (1950), reported an average test-retest reliability of .90 for this scale, with a range from .81 to .97 for various groups. The authors interpreted this to mean that the scale could place individuals along a dimension with a small margin of error. They stated that the score attained by an individual could be relied on in the sense that chance errors of measurement have been minimized. The original validation of the F scale was done primarily by case studies, interviews, and projective techniques. Clinical syndromes were painstakingly constructed and related to scores on the scale. Although this method admittedly was largely intuitive, numerous empirical studies have since supported the original findings and substantiated the validity of the F scale (e.g., Flowerman, et al., 1950; Scodel and Mussen, 1953;

Campbell and McCandless, 1951; Milton, 1952; Radke-Yarrow and Lande, 1953; Kates and Diab, 1955).

Some criticism has been made in recent years concerning the validity of this scale. Since each item on the scale is worded so that agreement indicates authoritarian attitudes, it was felt by some (Cohn, 1953; Bass, 1955; Chapman and Campbell, 1957; Jackson and Messick, 1957; Zuckerman and Norton, 1961) that a large part of the variance could be attributed to an acquiescent response set, and the scale was, therefore, invalid. The presence of acquiescence was usually demonstrated by constructing a "reversed" F scale, in which authoritarian attitudes would be indicated by disagreement with the items, and not finding the expected negative correlations.

Christie, et al. (1958), have challenged this approach (constructing reversed scales) on the grounds that the reversed items may be grammatically opposite, or logically opposite, but very seldom are psychologically opposite, and thus should not be expected to yield a negative correlation. Thus, according to Christie, et al., studies making use of a reversed scale are most often not a fair test of the hypothesis.

The original authors of the scale (Adorno, et al., 1950) realized that the items were negatively worded, and admitted that the argument against using all negative items is that it might produce a "set" or mechanical tendency to consistently agree or disagree. They answered this argument on several grounds:

1. Most individuals show variability of response, as indicated

by the item intercorrelation averaging .3 to .4.

2. There is a tendency to vary in order to avoid an extreme position.

3. Very similar results were obtained when an all-negative scale was inserted randomly into a longer series containing positive items.

4. Since the "set" argument implies that high scorers are not necessarily anti-Semitic nor lows anti-anti-Semitic, the final test is the validity of the scale. The authors felt that this had been convincingly demonstrated.

The authors expressed two major reasons for using only negative items: (1) they tend to be more discriminating (this has recently been supported by Gage and Chatterjee, 1960); (2) they can express subtle hostility without seeming to offend the democratic values which most prejudiced people feel they must maintain.

Another group of studies defending the F scale has contended that acquiescence set, in itself, is an indicator of authoritarian attitudes, and thus does not detract from the validity of the scale. Leavitt, et al. (1956), state that the F scale confounds form and content variables, but in the "right" direction. Authoritarian people, as measured by the scale, agree more with authoritative statements; therefore, a portion of the discriminatory power of the scale derives from its form, in addition to its content. Gage, et al. (1957), hold a very similar view. Messick and Jackson (1958) state that the acquiescent response set operates to increase the discriminatory power of the scale, rather than render it invalid. Further support for this point of view comes from Messick and Frederikson (1958), Zuckerman and Eisen (1962), Chapman and Block (1958), and Weatherley (1964).

In view of this research, it appeared that the California F scale does provide a valid and reliable measure of authoritarian attitudes, despite the presence of acquiescent response sets, and thus could be used in this study.

4. Ego-strength. To arrive at a measure of ego-strength, the Barron Ego-Strength Scale (Barron, 1953) was used. This scale is composed of 68 items drawn from the MMPI. An individual's score on this instrument is equal to the number of responses made in a predetermined, "healthy" direction. Scores can range from 0 to 68, with high scores being indicative of ego-strength.

Barron states that this instrument "appears to measure the various aspects of effective personal functioning which are usually subsumed under the term ego-strength." He contends further that high scorers are characterized by the "capacity for personal organization." Among the characteristics which are collectively referred to as ego-strength, and which he found to correlate with the prediction scale, are physiological stability and good health, a strong sense of reality, feelings of personal adequacy, permissive morality, lack of ethnic prejudice, emotional outgoingness, spontaneity, and intelligence.

The items for this scale were selected on the basis of significant correlations with rated improvement in 33 psychoneurotic patients who had been treated for six months in a psychiatric clinic. Responses were obtained before therapy began.

The sample of 33 patients was divided into two groups: 17 patients judged to have clearly improved and 16 who were judged to be unimproved.

Each case was intensively studied, and two skilled judges who had thoroughly acquainted themselves with the course of therapy were in considerable agreement (r of .91) in their independent ratings of the degree of improvement.

The improved and unimproved group could be distinguished on the basis of the scale at the .01 level. Odd-even reliability of the scale was .76, test-retest reliability after three months was .72.

The ability of the Barron Ego-Strength to predict outcome in psychotherapy has been further validated by Wirt (1955), Barron and Leary (1955), and Sunnett (1962). It has also been found to consistently differentiate between various psychiatric patients and normals by Gottesman (1959), Quay (1955), Taft (1957), Kleinmutz (1960), Worrell and Hill (1962), and Tamkin and Klett (1957). Korman (1960) found that psychiatric inpatients with high scores on the scale were able to resolve a discrimination conflict more quickly than a low ego-strength group, and Herron (1962a) has shown that, among schizophrenics, extreme ego-strength scores (high and low) were significantly in agreement with psychiatric ratings on prognosis. Himmelstein (1964) has found that self-referrals tend to obtain higher scores on the ego-strength scales than those earned by referred counselees.

Recent evidence (Silverman, 1963) has shown that Barron's scale can be used without giving the complete MMPI. Silverman found that the two forms correlated .91 for normals and .85 for schizophrenics. The ego-strength scale administered alone differentiated between normals and schizophrenics at the .02 level of significance.

5. Body-concern and Body-satisfaction. Two instruments were used to measure body-concern and body-satisfaction. The first of these was the Homonym Test of Secord (1953). This is a list of 100 words, 75 of which are body homonyms, i.e., words which can refer either to body parts and/or processes or to non-body concepts. An example of a body homonym is 'digit' which could be responded to with 'finger' (a body response) or 'number' (a non-body response).

The list of words is read by the examiner at the rate of one every five seconds. Subjects are instructed to write on an answer sheet the first word which comes into their minds after the examiner reads each stimulus word. Twenty-five words on the list are not homonyms, but 'dummy' words, which are included to destroy any set which might develop. Each subject's score is the number of body responses that are given to the list of stimulus words.

Secord hypothesized that the greater the number of body responses that were given by a subject, the more preoccupied and/or anxious he was concerning his body. Using a group of 145 college students, he extracted the 15 subjects making the highest scores and the 15 making the lowest scores as high and low criterion groups. Secord and one other rater were able to predict from Rorschach protocols whether or not a person belonged to high or low homonym groups, Secord being correct on 22 out of 28 ($p < .002$), and the other rater correctly predicting 20 of 28 ($p < .003$).

The author reported an inter-rater reliability in scoring of .99, and split-half reliabilities in two different samples of .81 and .73.

In this same study, a correlation of $-.42$ ($p < .01$) was reported between homonym scores and the total score on a Body-Acceptance Test, and of $-.54$ ($p < .01$) between homonym scores and a subtest of Acceptance of Body Build.

The second instrument, a measure of body-satisfaction, was the Body-Cathexis Scale of Secord and Jourard (1953). This is a Likert-type scale in which the subject must rate his satisfaction or dissatisfaction with 40 body parts or processes. Each body part is rated on a five-point scale rating from 1 (complete dissatisfaction) to 5 (complete satisfaction). The rating given to each body part is added, and the total divided by 40 to arrive at the overall score for each subject. The higher an individual scores, the more satisfaction is expressed with his body. Body-cathexis was defined by the authors as the degree of a person's feelings of satisfaction or dissatisfaction with various parts or processes of the body.

Secord and Jourard (1953) reported split-half reliabilities on this scale of .78 for males and .83 for females. For 56 college females, the Body-Cathexis (BC) Scale correlated $-.41$ ($p < .01$) with Homonym Test scores, indicating that body satisfaction is negatively related to body preoccupation and anxiety. The BC scale also correlated $-.37$ with the Maslow test of insecurity. Jourard and Secord (1955), in a further study, found that with males the BC scale correlated .58 with a Self-Cathexis (SC) Scale; with females the correlation was .66 (both $p < .01$).

Johnson (1956), in cross-validating several of these findings, found an inverse relationship between attitudes toward the body and the

number of symptoms reported. More specifically, with males there was a correlation of $-.33$ ($p < .05$) between Body-Cathexis and symptoms checked on the Cornell Index. With females this relationship was $-.40$ ($p < .01$).

B. Control Instrument

One of the primary dangers in administering a group of personality inventories or attitude scales is that the results may be confounded by various response styles on the part of the subjects (Jackson and Messick, 1958). That is, a subject's responding on these instruments may be attributable to some extent to such tendencies as his wanting to appear liberal, needing to avoid extremes, etc., thus detracting from the results that might have been obtained had the subject been less confounded in his responding to the item content.

Taylor (1961) has warned that in studies where there are several samples of self-attitudes or attitudes toward others, a tendency to find positive correlations between various measures of personality traits may accrue largely because of the willingness of a subject to ascribe socially desirable attitudes to himself, or to present himself in such a light. Edwards (1953, 1957) has voiced similar opinions, stating that social desirability may be viewed as a characteristic of test items, and is often a major determiner of a subject's responding to a personality inventory.

Although a recent study by Siller and Chipman (1964) found that influence of response sets are usually negligible in this type of experiment, the possibility existed that the social desirability variable

could confound and interfere with the results obtained in this experiment (due to the fact that several of the instruments were self-rating or attitude scales). It was, therefore, decided to include a measure of this variable in the test battery as a "control." That is, it was felt that the results of the study could be evaluated more accurately if some estimate of the extent of social desirability response sets were present.

A social desirability scale developed by Crowne and Marlowe (1960) was chosen as the instrument to include for this purpose. The authors considered their instrument to be superior to that developed by Edwards (1953) primarily because of the fact that the item content of their scale was much broader than that of Edwards, which referred almost exclusively to the presence or absence of symptoms and complaints. Edward's scale was described by them as a measure of the extent to which an individual is willing to admit to symptoms of maladjustment. Content of this nature makes it difficult, if not impossible, to determine whether subjects' responses are due to social desirability, or to a genuine absence of symptoms. The achievement of high social desirability scores may reflect the low frequency of pathological symptoms rather than the need of subjects to present themselves in a favorable light. This problem is made more acute by the fact that the true frequency of the various symptoms is not known.

In contrast to this pathology-oriented type of item, the content of the Marlowe-Crown Social Desirability Scale refers to behaviors which are culturally sanctioned, but highly improbable. Thus, the rationale

here is similar to the MMPI Lie Scale, although the items are less extreme. The ambiguity which arises from the failure to consider the actual incidence of traits, represented in the test items are avoided. Social desirability is defined by Marlowe and Crowne (1961) as a need for social approval and acceptance, and the belief that these can be attained by means of culturally acceptable and appropriate behavior. Thus, rather than seeing the social desirability response tendency as a function of the test item as did Edwards (1957), Marlowe and Crowne define it as a motivational variable.

The Marlowe-Crowne Social Desirability Scale (SDS) is composed of 33 items which discriminated at the .05 level or better between high and low total scores of 76 college students. Of these items, 18 are keyed "true" and 15 are keyed "false," with the subject's score being the number of responses made in the keyed direction. The larger the number of keyed responses, the stronger the social desirability response tendencies.

Crowne and Marlowe (1960), using Kuder-Richardson formula 20, report an internal consistency coefficient of .88 with this instrument. Also, a test-retest correlation of .89 was reported in the same study. Correlations of .35 and .56 with the Edwards Social Desirability Scale, and of -.54 between the Social Desirability Scale and the Barron's Independence of Judgment Scale (Barron, 1953b), have been reported (all $p < .01$). Marlowe and Crowne (1961), with 57 male college students, found that subjects with a high score on this scale expressed more favorable attitudes toward a boring experimental situation. Neither Edwards'

nor Barron's scales were able to make this differentiation.

Although the social desirability variable has been labeled a "control" variable, it was treated as a predictor in the present study, and included in that category when the results have been obtained. However, unlike the rest of the predictors, no hypotheses were made with respect to its relationships to the criterion, as it has not been considered theoretically important in contributing to attitudes toward disability. Rather, its primary importance was to serve as a check on the relationships of the predictors to the criterion.

C. Criterion Instruments

1. The Granofsky Pictures Test. The dependent variable in this experiment, attitudes toward the physically disabled, was measured by two instruments, the first developed by Granofsky (1956), and the second by Yaker, et al. (1960). Granofsky's instrument is a TAT-type projective instrument on which subjects are instructed to tell stories to stimulus pictures in which physically disabled people are depicted. There are 12 scenes in all, three within each of four diagnostic groups (wheelchair, leg amputation, facial disfigurement, arm amputation).

In order to facilitate the writing of the stories, three questions appear beneath each picture: "What is happening in this picture?" "How did it come about?" "What will happen next?" More detailed instructions were given on the cover of the booklet in which the pictures were contained.

The pictures are printed at the top of 8-1/2 x 11-inch sheets

of paper. Each picture is 4-1/2 x 6 inches, and the rest of the space is provided for the subject to write his story about the picture. It has been found (Granofsky, 1956; Masson, 1963) that this space is quite adequate for recording the stories. However, subjects are instructed to use the back side of the same sheet if more space is needed.

Since the responses elicited by this instrument are largely unstructured, it was important that a system of quantification be developed so that they could be objectively evaluated and scored. Thus, a scaling method was employed in which reactions to the disabled were placed on an 8-point continuum. Different degrees of strength of negative reactions toward the disabled were represented by scores of -5, -3, and -1, with -5 being the extreme negative reaction. Positive reactions were scored +1, +3, and +5, with +5 being the most positive, accepting reaction to the disabled. Neutral responses, which are usually indicated by a factual, colorless, or descriptive response, are scored zero. An ambivalent score, where the evidence from the response is too contradictory to support the scoring of a negative or positive alternative, is scored $\pm$.

The components of a -5 and a +5 reaction were described and specified by Granofsky to provide weights with which to better judge the middle range of responses. A -5 score suggests "absolute rejection, expressions of ridicule, horror, hostility, or repugnance, and/or isolation of the disabled as social outcasts." A +5 response indicates "the admittance of the disabled to all varieties of social interactions with the non-disabled. More than mere tolerance, it involves a

deliberate and well considered approach to the problems of accepting the disabled."

The scoring of responses was further facilitated and clarified by the conception and description of three theoretical qualitative categories of aspects of attitudes toward the disabled. These categories, an evaluation category (concepts of appraisal and estimation of disabled persons), a cognizance theory (reactions to the appearance of disability), and a social interrelationships category (concepts regarding the degree of social rapport with the disabled), were differentiated for both sides of the scale. That is, detailed descriptions were given of positive and negative evaluation, cognizance, and social interrelationships. It must be remembered that only one score is given to each response. These categories are but aspects of the response which can be objectively stated, thus facilitating scoring. The categories are elaborated as follows:

1. Evaluation

a. Negative evaluation: Feeling of pity and oversolicitousness toward the disabled. Regarding the disabled as objects of curiosity. Pre-conceived lower social status roles for the disabled. Over estimation of psychological concomitants of a disability. Exaggeration and misconception regarding limitations set by an injury.

b. Positive evaluation: Objective appraisal and realistic sympathetic evaluation of the disabled. Assessment of psychological concomitants of a disability in a practical way. Realistic estimation of limitations of a disability. Acceptance of the disabled on an equal social status footing with the non-disabled.

2. Cognizance

a. Negative cognizance: Undue awareness and occupying

one's self with the appearance of disabilities. Calling particular attention to the disabilities. Over-estimation of unsightliness of a disability.

b. Positive cognizance: De-emphasis of properties of disabilities, assignment of minor role to appearance of disability.

3. Social interrelationships

a. Negative social interrelationships: Setting apart of the disabled from other people. Resistance or reluctance to admit them to participation in various kinds of social relationships. Feelings of uncomfortableness, uneasiness, and anxiety and embarrassment in the presence of the disabled.

b. Positive social interrelationships: Admittance of disabled to a variety of social interactions with the non-disabled. Expressions of feeling at ease in the presence of the disabled.

Thus, subjects' responses to each of the 12 pictures received a single score depending on the direction and degree of the response. In order to facilitate tabulation of the data, the original algebraic scores were converted to continuous numbers by uniformly adding five points to each of the scores. The conversion system, then, was as follows: $-5 = 0$, $-3 = 2$, $-1 = 4$, 0 and $\pm = 5$, $+1 = 6$, $+3 = 8$, $+5 = 10$. A subject's total score could range from 0 to 120 points. Granofsky reported an inter-scorer reliability of .76 for the Pictures Test, indicating that the judges were evaluating the expressed attitudes toward the disabled in an objective, consistent, and stable manner.

In order to arrive at a suitable criterion against which to validate his instrument, Granofsky contacted 82 new members of the 52 Association, a non-profit, volunteer organization in New York City which provides placement, counseling, and entertainment services for disabled

veterans. These subjects were chosen because their reactions to physically disabled people could be observed and rated by supervisors while in the actual situation. To arrive at an empirical measure of this reaction, Granofsky developed a behavior-rating scale, whose objective was to secure a set of items which would sample various aspects of manifested behavior toward the disabled. Each of the items was considered as descriptive of a possible characteristic trend in the person which would be expressed often enough behaviorally to permit observation by the supervisors. Fifteen items were eventually decided upon, five in each of three subscales (evaluation, cognizance, social interrelationships). An objective scoring system was decided upon which resulted in one total score for each individual on the scale.

The validity of the Pictures Test, determined by the correlation between the subjects' scores on this instrument and their score on the behavior-rating scale, was found to be .56. A validity coefficient of this degree (.56), while not extremely high, is considered to be substantial enough to be of use in research of this type (Bell, 1948; Cronbach, 1960).

Correlations of the pictures of each of the four diagnostic subgroups with the criterion produced the following coefficients: Wheel-chair group, .58; leg amputation group, .56; facial disfigurement, .40; arm amputation, .36. Application of Hoyt's (1941) analysis of variance technique, which computes the proportion of total variance that is true variance, resulted in a reliability coefficient of .84.

Masson (1963), in a study investigating the relationship between

body-image (as measured by the body-barrier and penetration system of Fisher and Cleveland, 1958) and attitudes toward the disabled, made use of Granofsky's instrument. Although he was unable to find a significant relationship between the two variables, he did report an inter-rater reliability of .84 with the Pictures Test, thus providing further evidence that the pictures can be rated in a reliable, consistent manner.

2. The ATDP Scale. This instrument is a Likert-type scale in which the subject responds to the statements by expressing his degree of agreement or disagreement on a six-point scale ranging from "I agree very much" to "I disagree very much." To date, three different forms of the scale have been developed, the original scale being composed of 20 items, and two subsequent scales of 30 items each. Form B, one of the 30-item scales, is considered superior by its authors in terms of its correlation with other scales (Block and Yaker, 1966).

In order to bolster the criterion, thus insuring that attitudes toward disability are being adequately measured, Form B was added to the battery as a second criterion instrument.

Each statement in the scale suggests that disabled persons are either the same as physically normal persons, or that they are different. The statements cover two aspects of this problem. Approximately one-half are worded to point out similarities or differences in "personality" characteristics, while the others suggest the need or lack of need for "special treatment" for the disabled. The following

statements are illustrative of each type: (personality)--"Most disabled persons worry a great deal"; (special treatment)--"You should not expect too much from disabled persons."

The reliability and validity of the three scales have been determined for both disabled and non-disabled persons, the original disabled group consisting of 248 workers at Abilities, Inc. (a manufacturing firm employing severely disabled persons), and the non-disabled group consisting of 625 Hofstra College students.

Validity was examined in terms of interrelationships that might be predicted to exist between ATDP scores and other measures of behavior. Thus, evidence that this instrument measures what it purports to measure was obtained through construct validation. With disabled persons, the ATDP score was found to be positively related to satisfactory work performance ($p < .05$), job satisfaction ($p < .01$), and intelligence ($p < .05$). Females scored higher (were more acceptant) than males ($p < .05$). Scores on this scale were found to be negatively related to anxiety ($p < .01$), and age ($p < .05$). The authors state that a high score on this instrument by disabled persons indicates self-acceptance, whereas with non-disabled people it would indicate acceptance of the disabled (a low score, conversely, would indicate a prejudice of the disabled).

In investigating the performance of non-disabled persons on this scale, it was found that they score significantly lower (less acceptant) than the disabled ($p < .001$). It was also found that the ATDP was positively related to the amount of contact that the non-disabled person

had had with disabled people ($p < .001$). No correlation was found between the ATDP scale and the Edwards' Social Desirability Scale, suggesting that responses to this scale are not significantly determined by such a response set. The authors also provide evidence that the ATDP scale is difficult to fake in a given direction.

Since Form B (one of the 30-item scales) of the ATDP was utilized in this experiment, only that scale's reliability data will be presented. Split-half reliabilities for Form B have been found to be .814 ($N = 139$) and .792 ($N = 50$). The following correlations were reported between Form B and Form A (Equivalent Form reliability): .831 ($N = 57$), .721 ($N = 84$), .412 ($N = 58$). In two different samples Form B has correlated .762 ($N = 40$) and .572 ($N = 81$) with the original 20-item form of the ATDP. All of the above data has been collected with non-disabled subjects. Although no test-retest reliability coefficients were reported for Form B, a coefficient of .70 was found with the original form with a period of four months between testing.

In this study, the directions for taking the ATDP scale were slightly modified. This was done by explicitly defining to what types of disability the term "disabled persons" refers. Since a pilot study indicated that subjects felt that this term was too vague (could refer to anything from deafness to quadriplegia), it was felt that specifying the disability to include only amputation, wheelchair confinement, and facial disfigurement should lead to increased reliability. Bell (1962) and Siller and Chipman (1964) have previously discussed this apparent weakness in the ATDP.

It was felt that adding the ATDP scale to the Pictures Test would result in a measure of the criterion which would be broader and more inclusive than either measure alone. Since the two instruments appear to tap quite different levels of functioning (Granofsky Pictures--unconscious feelings and reactions; ATDP--conscious opinions, beliefs), the probability that attitudes toward physically disabled people were being reliably and validly measured should be increased by taking both instruments into consideration.

In summary, then, there were six instruments used to measure the prediction variables, one control instrument (thus resulting in seven predictors), and two instruments to measure the criterion variable. The five initial hypotheses, stated in terms of the instruments used to measure the variables, are repeated below.

1. The Barratt-Fruchter Chair-Window Test was used as a measure of field-dependence. A low score on this instrument should be associated with negative attitudes toward the disabled, as indicated by low scores on the Granofsky Pictures and the ATDP scale.

2. The Social Acquiescence Scale was used to measure social conformity. A high score on this scale should be associated with negative attitudes toward the disabled.

3. The California F Scale was used as a measure of authoritarian tendencies. A high score on this scale should be associated with negative attitudes toward the disabled.

4. The Barron Ego-Strength Scale was used to measure ego-strength. A low score on this scale should be associated with negative attitudes

toward the disabled.

5. The Homonym Test and the Body-Cathexis Scale were used to measure body-concern and body-satisfaction respectively. A high score on the Homonym Test and a low score on the Body-Cathexis Scale should be associated with negative attitudes toward the disabled.

CHAPTER V

METHOD

A. Subjects.

The subjects used in this experiment were female college students who were enrolled in either of two beginning psychology courses.

College students were selected as subjects for three basic reasons:

1. They possess sufficient intellectual and verbal ability to understand the directions to the various tests and the items contained in each, and to respond adequately to the demands for expression inherent in several of the instruments.
2. It was felt that they represented a reasonably healthy, statistically normal population which, as a group, would not be expected to harbor attitudes in either an extreme positive or negative direction.
3. They were accessible due to the fact that they were required to participate in a certain number of psychological experiments.

In order to keep the subject population as homogeneous as possible with regard to sex, thus avoiding any additional variance that might result from differences in performance due to sex of the subject, it was decided to limit the study to subjects of one sex. Since the Granofsky Pictures Test, one of the criterion instruments in the study, was originally validated on female subjects, it was felt that females

would be more appropriate subjects than males.

The class rolls for Psychology 201 and 202 were obtained, each girl's name in the two classes was recorded, and an attempt was made to find the mailing addresses of as many of these potential subjects as possible. A total of 295 mailing addresses were eventually obtained, and a letter was sent to each student.

Since a copy of the general form letter appears in Appendix A, it will be stated here only that the letter informed them of the following:

1. Their selection as participants in the study.
2. The time and place that they were expected to attend.
3. The general nature of the experiment.

Of the 295 subjects who originally received letters, 41 did not participate in the study. The majority of these 41 informed the investigator that they had fulfilled their experimental requirements for their particular course and did not wish to participate in this study. A small minority did not attend the experiment and failed to inform the examiner in advance that they would not participate.

Of the remaining 254 subjects, four neglected for unknown reasons to take at least one of the instruments that were included in the battery. In addition, the tests of ten other subjects were disregarded due to the incompleteness and/or lack of seriousness with which various tests (in most cases the Granofsky) were taken. The test data gathered from the remaining 240 subjects were considered adequate and valid for the purposes of this experiment.

Although the subjects ranged in age from 17 to 44, 92% of them (N=221) were aged 18 through 20. The mean age was 19.55 years, and the mode was 19 (N = 80).

When the data collection was completed, a second letter was sent to each participant explaining the purpose and rationale of the study and thanking them for their cooperation. A copy of this letter appears in Appendix A.

B. Collection of Data.

The data from the 240 subjects were collected by dividing them into large groups and administering the complete battery to each group in one evening. Four sessions of group testing were needed to complete the administration of tests to all of the subjects. The sessions were held approximately one week apart, with an average of 60 participants per session. Although the testing time ranged from 105 to 165 minutes, depending primarily on how long it took subjects to complete the Granofsky, most subjects completed all nine of the tests in approximately 120 minutes.

A definite order was followed in the administration of the instruments. This order was as follows:

1. Secord's Homonym Test.
2. Barratt-Fruchter Chair-Window Test.
3. Barron's Ego-Strength Scale.
4. Bass' Social Acquiescence Scale.
5. California F Scale.

6. Marlowe-Crowne Social Desirability Scale.
7. Granofsky Pictures Test.
8. ATDP.
9. Body-Cathexis Scale.

Secord's homonym Test was administered first to insure that subjects' responses to the stimulus words would be as naive and free of set as possible. Since several of the instruments centered around, or were concerned with, aspects of the body, it was felt that administering this test later in the battery would influence the results obtained with it.

Because it requires rather intense concentration and sustained attention, the Chair-Window Test was administered as early as possible, while the subjects were still very alert. It was felt that immediately following the Homonym Test was the best time to administer this instrument.

The next four instruments were administered in their particular order for no definite reasons. However, since it was considered important to administer the Homonym Test and the Chair-Window as early as possible, and because it was felt that the Granofsky Pictures Test would drain most of the subjects' motivation to perform, it seemed logical to place them between the first two tests and the Pictures Test. Also, since they are all relatively short and do not require a great deal of effort from a subject, it was felt that the subject could still be reasonably fresh by the time she was to begin responding to the Pictures Test. Approximately 60 minutes had passed by the time the first

six instruments had been administered.

The ATDP and the Body-Cathexis Scale were kept until last because the experimenter felt that the focus of these tests (disabled people and the state of one's body respectively) might possibly interfere with subjects' performances on the Granofsky had they been administered prior to it.

C. Scoring of Data.

1. Objective Tests. All instruments in this battery, excepting the Granofsky Pictures Test, were objective tests of various kinds. The method for scoring these tests has been previously discussed in the INSTRUMENTS chapter.

These tests were scored by the experimenter and an undergraduate assistant. It was not felt that each test must be scored by both individuals because of the clearness and simplicity of the various scoring procedures. However, 20 protocols of each instrument, originally scored by the assistant, were rescored by the experimenter to serve as a measure of the accuracy and reliability of the original scoring. On these 160 protocols (8 tests, 20 protocols per test), containing approximately 8,000 items, only 14 errors were found. It was felt on the basis of this negligible percentage of errors (less than .002%), that the reliability of scoring the objective tests has been demonstrated to be sufficient for the purposes of this study.

2. Projective Tests. The Granofsky Pictures Test, as has been previously discussed in the chapter on INSTRUMENTS, is a relatively

unstructured, open-ended test, requiring a paragraph-length response from the subject. Since the subject must invest his own attitudes, feelings, and beliefs into his response rather than merely responding Yes or No, True or False, etc., to a statement, this instrument can be considered to be a projective technique.

Since responses of a subjective, open-ended nature are elicited by the test, a problem of translating the material into measures enabling quantitative analysis arises. Although the general method of scoring these protocols was discussed in the INSTRUMENTS chapter, and thus will not be presented again, it is necessary to demonstrate, similarly to the objective tests, that this test was reliably scored in the present study. Unless the Pictures Test can be shown to have been scored in a consistent, communicable manner, its value as a measure of the criterion (attitudes toward disabled people) as seriously lessened.

In order to show that the basis upon which subjects' responses to pictures of visibly disabled people was consistent, undimensional, and capable of being communicated to other scorers, the scores arrived at by the experimenter were correlated with those of another judge who was following the same general directions for scoring. Since it is necessary in scoring these responses not to take them at face value, but rather to look for deeper, dynamic attitudes and feelings, it was felt that the second judge should be experienced in interpretations on this level. Ideally he should be of at least as advanced a level of training and experience as the experimenter. For this reason, a fellow intern in Clinical Psychology was selected for the task.

The two judges first separately scored subjects' responses to the pictures on 15 randomly selected protocols (180 stories) with their only guideline being the "Instructions to the Raters" (Appendix B), outlined in Granofsky's (1956) original study. There had been no discussion between the raters concerning scoring procedures prior to this.

On this first training session of 15 protocols, the judges agreed on 79 of 180 possible responses (43%), with a correlation (Pearson product-moment) of .67 in their scoring (complete data on inter-scorer reliability is found in Appendix C). Although this was encouraging evidence that the system for scoring these responses could be communicated from one rater to another, it was felt that the correlation would have to be considerably higher if this instrument was to be a useful criterion measure.

Following this initial scoring of protocols, the judges conferred and discussed their rationale and frame of reference leading to their scoring of the various responses. Particular attention was given to those responses which varied greatly in the scores given to them by the raters.

A second training session of 15 protocols was then randomly selected and separately scored in the same manner as the first group. This time there were 92 agreements (51%), and a correlation of .76 between scorers. Although this is as high as the interscorer reliability recorded by Granofsky (1956) in his original study, it was felt that it was possible to arrive at a still higher level of scoring consistency, thus further insuring that the criterion would be represented as reliably and

consistently as possible.

The two judges then conferred again, following much the same pattern as the previous discussion. After this second meeting, it was felt that the judges were ready for a final, "official" scoring session. This time 40 responses were randomly selected from the protocols and separately scored by the judges. On this third session, agreement was found on 24 (60%) of the responses, and a correlation of .84 was recorded. This is the same inter-rater reliability that Masson (1963) reported, and was considered sufficiently high for the purposes of this study.

The experimenter, having demonstrated that the responses were being consistently and undimensionally scored, then proceeded to score all of the protocols. The subjects were randomly divided into initial and cross-validation samples after all of the tests, both objective and projective, had been scored.

D. Analysis of Data.

The analysis of the data that had been collected and scored could be viewed as a two-step procedure. First, it was necessary to arrange the data in such a way that the appropriate statistical procedures could be performed. Secondly, it was necessary to apply these statistical methods to test the initial hypotheses and enable the experimenter to derive and evaluate the more subtle interactions that were present in the data.

Since the plan of the study was to test the initial hypotheses that

had been developed on the basis of previous literature, extract from the data the more subtle interactions occurring between variables, develop more refined hypotheses based on these interactions, and test these hypotheses, it was felt that two distinct samples would be needed. The initial sample would be instrumental in testing the initial hypotheses and formulating the second-level, interactive ones. The second, or cross-validation sample would be used to evaluate this second group of hypotheses. Thus, the first step in the analysis of the data was to divide it into two large groups, or samples.

This division was done in random fashion by assigning a number to each subject, placing these numbers in a container, and drawing them blindly until the samples were complete. All data from all subjects had been collected and scored before this division into the two samples was made. It was decided to include 150 subjects in the initial sample, and 90 in the cross-validation sample.

Since sample size is inversely related to the size needed in a statistical relationship for that relationship to be significant, it was felt that it would be appropriate for the initial sample to be larger than the cross-validation sample. That is, since the initial sample was seen primarily as a means of developing and refining hypotheses, making its size very large would result in more statistically significant relationships to evaluate in the second sample. The cross-validation sample, being smaller, would require statistical relationships to be larger if they were to be significant. Thus, any relationships which might be found to be significant solely by chance in the initial

sample, because of the size of the sample, would most probably be discarded in the cross-validation sample because of the more stringent criteria of significance due to the smaller sample size. Those relationships which were "true" or meaningful (significance due to actual relationship of the variables rather than to chance or sample size) would be more likely to hold up upon cross-validation.

Thus, the initial sample was seen as a means of developing, stating, and producing a number of relationships which would hopefully be meaningful as well as significant. The cross-validation sample was viewed as a means of supporting or contraindicating the findings of the first sample. The relative sizes of the two samples were chosen with these goals in mind.

Since one of the statistical procedures which was to be used required that subjects in a particular sample be divided into high, medium and low on the basis of certain variables, the number of subjects in that sample would have to be sufficiently large to permit adequate tests of the hypotheses after the divisions were made. Since a sample size of 30 is generally considered large enough for this, an overall N of 90 was felt to be sufficient to provide tests of the three subdivisions of data.

The initial sample was made larger than this minimum of 90 because of the previously stated purpose for which that sample was intended. That is, because the primary purpose of the initial sample was to develop hypotheses to be retested with more stringent criteria for significance, the larger size of that sample made it more likely that any

meaningful relationships present in the original data would be brought to light. At this stage of developing hypotheses, it was felt that it was better to include more statistically significant interactions than might be meaningfully warranted, than to be overly stringent and thus unnecessarily risk the exclusion of some relationships which might be meaningful and which might be upheld in the cross-validation sample. Thus, an initial sample of 150 subjects was decided upon, resulting in subdivisions of 50 for certain statistical analyses.

The five basic, original hypotheses were tested by simply correlating the predictor variables with the two criterion instruments. By also correlating the predictor and criterion variables with each other, an intercorrelation matrix was arrived at which provided measures of the extent to which each variable (or instrument) was related to every other variable. The correlation coefficients in this matrix were based on a sample of 150. Although these correlations provide only a limited amount of information in themselves, they do provide data which, with more refined procedures, can be viewed, analyzed, and interpreted in such a way as to generate more refined hypotheses for testing.

In this study, a procedure using moderator variables (Saunders, 1956), was utilized to break down the data in such a way that interactive effects could be studied and hypotheses developed on the basis of these interactions. The particular situation in which the use of moderator variables is applicable is that in which the relationship between two or more given variables is found to vary as a function of changes in the value of a character of one or more other variables.

For example, if Variable A is found to minimally correlate with Variable B, subgroups may be isolated within this overall relationship which show highly differential patterns of validity or degrees of relationship. The best way to isolate these subgroups, thus in effect sorting heterogeneous aggregates of individuals into homogeneous ones, may be through the use of a third, moderator variable (e.g., Variable C). Thus, if Variable B is divided into subgroups of high, medium and low on the basis of the relative performance of subjects on Variable C, and then the scores of the subgroups are correlated with their corresponding scores on Variable A, some highly varying relationships can be extracted. These interactions can then be tested out on a subsequent sample to help determine whether a significant, meaningful relationship exists between the variables in question.

Thus, if Variable A is found to correlate .10 with Variable B, we have only the information that these variables do not appear to be related to any significant degree. However, if we divide Variable B into subgroups of high, medium and low on the basis of subjects' performances on Variable C, and then correlate scores between Variable A and Variable B within the three subgroups, we might find that the relationship varies greatly under these different conditions. For example, in the subgroup of individuals who scored "high" on Variable C, Variable A and Variable B may correlate .30. In the "medium" group the correlation might be .03. In the low group it might be -.48. Thus, the relationship between A and B could possibly vary dramatically under different conditions, providing a great deal more useful information

than the initial overall correlation between the variables. This was the technique used in this study to study interactive effects between the variables, and to break down the overall correlations into relationships which often varied considerably. All interactions found to be significant in the initial sample were then stated as hypotheses and re-examined in the cross-validation sample.

In Banas' (1965) discussion of moderator variables, he states that they can be chosen on either an empirical or a rational basis, with rational selection being preferred. Since each of the predictors in this study has been thought to be of theoretical importance in the dynamics of attitudes toward disabled people, it is likely that the resultant attitude would be a function of interactions among them. Thus, it was felt that utilizing the predictors as moderators for each other would provide the greatest amount of pertinent information. To this extent, selection was rational in the present experiment.

The attempt was made in this study to divide the samples into equal subgroups, that is, into subgroups of 50 subjects each in the initial sample and of 30 subjects each in the cross-validation sample. However, this was not always possible due to tie scores in many instances.

For example, if a subgroup in the initial sample consisted of 48 subjects, and the next score was attained by eight subjects, those eight subjects would begin the next subgroup. Rather than arbitrarily placing two of those subjects into the preceding subgroup, it was decided to make the divisions "natural" and as close to even as possible. Thus, a typical division might be 52, 49, 49 for high, medium and low, rather

than 50, 50, 50.

The final statistical methodology used in this experiment was originally described by Hotelling (1936) and termed the "canonical correlation" by him. This concept is defined by Cooley and Lohnes (1962), as the maximum correlation between linear functions of two sets of variables, such as two sets of measurements made on the same subject. In this experiment, the two sets of variables or measurements would be the predictor and criterion instruments.

Thus, a linear function is developed for each set of variables. The problem is to find two sets of weights which, when applied to the variables, maximizes the correlation between the linear functions. Thus, a correlation coefficient is derived which provides the information of whether one set of variables (e.g., the predictors) is significantly related to the second set (e.g., the criteria). In addition, through the process of weighting, some measure of the importance of the variables in each set is arrived at. It is thus possible in the present study to attain some estimate of the relative importance of the predictors, and thus of the theoretical approach which each represents in contributing to attitudes toward disability.

Since both multiple predictors and criteria were present in this experiment, the canonical correlation was considered most appropriate for the purposes discussed above. If there had been only one criterion, the problem would have been one of multiple regression.

Due to their complexity and length, all analyses in the present study were done by means of electronic computers.

CHAPTER VI

RESULTS OF INITIAL SAMPLE

The maximum canonical correlation of the initial sample was .47, which is significant at the .001 level. Therefore, there is at least one significant way in which the predictors relate to the criteria. The personality constructs resulting from the various theoretical approaches can be said then to be significantly related to attitudes toward visibly disabled people as they are measured in this study. Since the number of possible pairs of linear combinations is equal to the number of predictor or criterion measures (whichever is smaller), a second combination was developed in this study, which had two criterion measures. However, the correlation in this instance (.20) was not significant.

TABLE I
CANONICAL VECTORS OF THE INITIAL SAMPLE

Predictors	Criteria
-.68 Authoritarianism	.87 ATDP
.46 Social Desirability	.26 Granofsky Pictures
.34 Field-Independence	
.27 Body-Satisfaction	
-.12 Body-Concern	
.02 Ego-Strength	
.02 Social Conformity	

The contribution which the individual variables made to the significantly related canonical variates is presented in Table 1. The loadings reveal that authoritarianism is the primary variable in predicting attitudes toward disability. The tendency to respond in a socially desirable manner is the most important positive predictor, suggesting that some of the relations between predictors and criteria in this study may be heavily influenced by this response bias,, with field-dependence and body-satisfaction also appearing relatively high in predictive importance.

The ATDP scale appears considerably more important than the Granofsky Pictures Test as a measure of the criterion in this sample, as its relative weight is much greater than that of the latter instrument.

On the basis of the nine-variable correlation matrix (Table 2) derived from the initial sample ($N = 150$), most of the initial hypotheses were supported to some degree. Hypothesis three was most strongly supported as authoritarianism, as measured by the California F Scale, correlated in a negative, highly significant ($p < .01$) manner with both measures of attitudes toward disabled persons. This would indicate, consistent with the hypothesis, that highly negative attitudes toward disabled people are directly related to the degree of authoritarianism on the part of the non-disabled.

Hypothesis 5, which dealt with the relationship between the non-disabled individual's feelings about his own body and his attitudes toward physically disabled people, received somewhat inconsistent support. Body-satisfaction, as measured by the Body-Cathexis Scale, was found to

correlate significantly ($p < .05$) with both criterion measures, thus supporting Hypothesis 5a, but no significant relationship between anxiety and concern about one's own body, as measured by the Homonym Test, and attitudes toward the disabled was found, thus not supporting Hypothesis 5b. Thus, the data would suggest that some positive relationship exists between the degree of conscious satisfaction an individual has with his body and the manner in which he reacts to disabled people; the greater the self-satisfaction, the more acceptant and positive the reaction to disability. On the basis of the initial data, however, there appears to be no relationship between any type of more basic, unconscious somatic concerns and attitudes toward disabled people. Conscious attitudes and feelings about one's body, then, would appear to be more important in determining one's reaction to this type of stimulation.

Hypothesis 1 (the more field-dependent an individual is, the less acceptant of the disabled he will be) and 4 (the less ego-strength an individual possesses, the less acceptant he will be) were also supported by the data, although in neither case could the support be considered strong. A significant, positive relationship ($p < .05$) was found between field-independence, as measured by the Chair-Window Test, and one of the criterion measures for attitudes toward disability (ATDP scale), but the second criterion measure (The Granofsky Pictures) was virtually unrelated ($r = .02$) to field-independence as it was measured here.

A very similar situation is found with the relationship between ego-strength and attitudes toward disabled people. Once again, the

TABLE 2
NINE-VARIABLE CORRELATION MATRIX OF
THE INITIAL SAMPLE (N = 150)

	1	2	3	4	5	6	7	8
1								
2	.02							
3	-.09	.46**						
4	.10	-.19*	-.30**					
5	.02	-.04	-.14	.32**				
6	.04	.08	-.01	-.05	.06			
7	-.05	.14	.05	.19*	.17*	-.02		
8	.20*	-.09	-.33**	.23**	.20*	-.02	.22**	
9	.01	-.15	-.25**	.09	.16*	-.10	.10	.37**

* $p < .05$

** $p < .01$

- 1 Field-Independence
- 2 Social Conformity
- 3 Authoritarianism
- 4 Ego-Strength
- 5 Body-Satisfaction

- 6 Body-Concern
- 7 Social Desirability
- 8 Attitudes Toward Disabled Persons Scale
- 9 Granofsky Pictures Test

ATDP correlated significantly ($p < .01$) with the predictor variable, as measured by Barron's Ego-strength Scale, but only a minimal correlation could be found between the Granofsky and the Ego-Strength Scale. Thus, there is slight, tentative support for the possibility of positive relationships between ego-strength and attitudes toward disabled people. The relationship between ego-strength and attitudes toward disability, as well as that between body-satisfaction and attitudes toward the disabled, is made to seem ever more tentative, however, by the fact that social desirability correlated .22 ($p < .01$) with the ATDP, .19 with the Ego-Strength Scale ($p < .05$), and .17 ($p < .05$) with the Body-Cathexis Scale, suggesting that some degree of the correlations of these predictor variables with the ATDP scale might be attributable to this response style.

No support was given to Hypothesis 2 (the more socially conforming an individual is, the less acceptant of the disabled he will be). Although the relationship between social conformity, as measured by Bass' Social Acquiescence Scale and the two criterion measures was in the right direction (i.e., a negative correlation between social conformity and attitudes toward the disabled), it was not of such a degree as to be considered significant at the .05 level.

Thus, as a way of summarizing the findings with respect to the initial hypotheses, they are restated below with a note added to each describing whether each particular hypothesis was supported by the data, and if so, the degree of the support.

The more field-dependent an individual is, the less acceptant of

the disabled he will be. Slightly supported by the data, as a correlation of .20 ($p < .05$) was found between the Chair-Window Test (a measure of field-independence) and the ATDP scale.

Hypothesis 2. The more socially conforming an individual is, the less acceptant of the disabled he will be. Not supported by the data.

Hypothesis 3. The more authoritarian an individual is, the less acceptant he will be of disability. Strongly supported, as the California F Scale correlated $-.331$ and $-.251$ (both $p < .01$) respectively with the ATDP and the Granofsky Pictures.

Hypothesis 4. The more ego-strength an individual possesses, the more acceptant of disability he will be. Slightly supported, as a correlation of .23 ($p < .01$) was found between the Ego-Strength Scale and the ATDP.

Hypothesis 5. (a) The more consciously satisfied an individual is with his body, the more acceptant of disabled persons he will be. Strongly supported, as the Body-Cathexis Scale was found to correlate .20 and .16 (both $p < .05$) with the ATDP and the Granofsky Pictures, respectively. (b) The more anxious and concerned an individual is about his body, the less acceptant of the disabled he will be. Not supported by data.

The highest intercorrelation between any two of the predictor variables was that of authoritarianism with social conformity, which yielded a coefficient of .46 ($p < .01$). This would suggest that conformity to society's dictates is positively related to the degree of authoritarian attitudes present within an individual, i.e., highly conforming

people would also tend to be highly authoritarian.

This finding is consistent with the views of Adorno, et al. (1950), who, in discussing the relationship between authoritarianism and conformity, state:

Prejudiced subjects tend to report a relatively harsh and more threatening type of home discipline which was experienced as arbitrary by the child. Related to this is a tendency apparent in families of prejudiced subjects to base interrelationships on rather clearly defined roles of dominance and submission in contradistinction to equalitarian policies. Family relationships are characterized by fearful subservience to the demands of the parents and by an early suppression of the impulses not acceptable to them.

The goals which such parents have in mind in rearing and training their children tend to be highly conventional. The status-anxiety so often found in families of prejudiced subjects is reflected in the adoption of a rigid and externalized set of values: what is socially acceptable and what is helpful in climbing the social ladder is considered "good," and what deviates, what is different, and what is socially inferior is considered "bad". . . . (Pg. 385.)

Recent studies by Bass (1956), Shaw (1961), and Vaughn and White (1966) have also reported significantly positive relationships between these two variables.

Authoritarianism, in this matrix, was found to be negatively related ($r = -.30$) to ego-strength ($p < .01$). This also is consistent with the views expressed by Adorno, et al., who state:

Low scorers (i.e., low authoritarians) often tend toward a more successful integration of the various aspects of their personalities, they tend to remain less immature and less infantile. They thus turn out to have more capacity for sustained effort, more ability to postpone pleasure for the sake of internalized values, more ability to assume responsibility, and more emotional maturity. The absence versus the presence

of any or all of these characteristics may be summarized as a "weak" versus a "strong" ego.

The fact that low scorers manifest relative strength of the rational tendencies as compared to the irrational may be due to their attempt to master and sublimate rather than escape the unconscious. Thus, the low scorer's adaptation to reality is more flexible in spite of the more open conflict and anxiety which accompanies the greater awareness of existing problems. (Pg. 457.)

Barron (1953a) has reported findings which also support the results of the present study.

Although a significant ($p < .01$) positive relationship is found between body-satisfaction and ego-strength ($r = .32$), the relatively high correlation of both of these variables with the socially desirable response set (both $p < .05$) suggests that the strength of this relationship may be due to a large extent to the fact that they are both susceptible to this bias.

Since four out of the five hypotheses were to some degree supported (although the possibility existed that a socially desirable response set may have contributed somewhat to some of the significant relationships), and all of the correlations between predictors and criterion were in the predicted direction, it was felt that a closer examination of the data was certainly warranted. A more detailed look at the data would also provide a great deal more information and clarification of the interrelationships of the nine variables.

As has been previously explained, a method of arranging and analyzing the data utilizing moderator variables was the procedure by which this examination would take place. By means of this procedure, 126

correlations between the various predictors and each criterion, thus resulting in a total of 252 correlation coefficients, could be determined. Each predictor variable was correlated with each criterion variable when each of these criterion variables was divided into high, medium and low on the basis of subjects' performances on each of the predictors, which in effect served as moderators for each other. For example, a variable such as social conformity was correlated with attitudes toward disabled people when this criterion was divided into high, medium, and low on the basis of subjects' relative standing on each of the other predictors, such as body-satisfaction, ego-strength, authoritarianism, etc., in turn, until each predictor had served as a moderator for every other predictor.

The relationship between each predictor and each criterion instrument could be viewed under 18 different conditions (six other predictors serving as moderators, each under high, medium and low conditions), in addition to the initial overall correlations previously discussed.

The information concerning these interactions is presented in Tables 3 to 9. Of the 252 coefficients attained by this method, 49 are significant at the .05 level. Twenty of these significant correlations were significant at the .01 level. Since only 13 correlations would be expected to be significant by chance at the .05 level, and only three at the .01 level, the number that were found to be significant represents a genuine departure from chance. Since only one significant correlation was in a direction opposite to that which was predicted, evidence is provided for the meaningfulness, in addition to significance

of the relationships.

The finding (on the basis of the initial correlation matrix and canonical correlation) that the single most important predictor of attitudes toward disability was the degree of authoritarianism of the non-disabled was supported by the subgroup correlations. Of the 49 statistically significant relationships isolated by this technique between predictor and criterion instruments, 17 had authoritarianism as the predictor. (See Table 5.)

In several instances the use of a moderator variable did not significantly change the overall relationship between predictor and criterion. This was most apparent when either social conformity (Table 2) or body-concern (Table 8) was the predictor. In others the relationship was considerably clarified. For example, the overall relationship between ego-strength and attitudes toward the disabled was one which originally appeared minimally statistically significant and lacking in informational value. When subgroups were isolated by the use of moderator variables, the relationship was seen to vary considerably depending on the condition under which it was examined. An example of this can be seen by consulting section C of Table 6.

As shown in this table and in Table 2, the overall correlation between ego-strength and the respective criterion measures was .23 ($p < .01$) with the ATDP scale and .09 with the Granofsky Pictures Test. When authoritarianism was the moderator, as shown in Table 6, Section C, a definite pattern in the relationship between the predictor and criteria emerges. Thus, for subjects who are highly authoritarian,

TABLE 3

CORRELATIONS BETWEEN FIELD-INDEPENDENCE AND ATTITUDES TOWARD DISABILITY

	Overall Correlation (N=150)	Moderator					
		A Social Conformity (SC)***	B Authori- tarianism (A)	C Ego- Strength (ES)	D Body- Satisfaction (BS)	E Body- Concern (BC)	F Social Desirability (SD)
ATDP	.20*						
High		.21	.31*	.18	.20	.12	.19
Medium		.20	.12	.30*	.26	.32*	.04
Low		.21	.16	.05	.09	.27	.41**
Granofsky	.01						
High		-.18	.21	.01	-.07	.07	-.07
Medium		.14	-.16	.11	.03	.01	-.09
Low		.10	-.01	-.12	.06	-.02	.20

*p < .05

**p < .01

***The N in each of the subgroup correlations was approximately 50.

TABLE 4

CORRELATIONS BETWEEN SOCIAL CONFORMITY AND ATTITUDES TOWARD DISABILITY

		Moderator					
	Overall Correlation (N=150)	A Field- Independence (FI)**	B Authori- tarianism (A)	C Ego- Strength (ES)	D Body- Satisfaction (BS)	E Body- Concern (BC)	F Social Desirability (SD)
ATDP	-.09						
High		-.07	.09	-.15	-.07	.07	-.11
Medium		-.06	.07	.01	-.14	-.20	-.23
Low		-.17	-.09	.01	-.04	-.15	-.12
Granofsky	-.15						
High		-.15	-.07	-.26	-.25	-.18	-.13
Medium		-.28*	-.01	-.08	-.25	-.27*	-.07
Low		-.02	-.15	-.09	.05	.02	-.26

*p < .05

**The N in each of the subgroup correlations was approximately 50.

TABLE 5
CORRELATIONS BETWEEN AUTHORITARIANISM AND ATTITUDES TOWARD DISABILITY

	Overall Correlation (N=150)	Moderator					
		A Field- Independence (FI)***	B Social Conformity (BC)	C Ego- Strength (ES)	D Body- Satisfaction (BS)	E Body- Concern (BC)	F Social Desirability (SD)
ATDP	-.33**						
High		-.12	-.12	-.22	-.12	-.17	-.16
Medium		-.47**	-.44**	-.24	-.49**	-.53**	-.28*
Low		-.31*	-.38**	-.41**	-.31*	-.24	-.54**
Granovsky	-.25**						
High		-.14	-.20	-.39**	-.25	-.14	-.16
Medium		-.36*	-.27	-.04	-.43**	-.39**	-.19
Low		-.23	-.31*	-.33*	-.04	-.16	-.32*

*p < .05

**p < .01

***The N in each of the subgroup correlations was approximately 50.

TABLE 6

CORRELATIONS BETWEEN EGO-STRENGTH AND ATTITUDES TOWARD DISABILITY

		Moderator					
		A	B	C	D	E	F
		Field- Independence (FI)***	Social Conformity (SC)	Authori- tarianism (A)	Body- Satisfaction (BS)	Body- Concern (BC)	Social Desirability (SD)
Overall	Correlation (N=150)						
ATDP	.23**						
High		.28*	.03	.28*	.03	.29*	.18
Medium		.23	.27*	-.09	.44*	.37**	.04
Low		.14	.32*	.27*	.02	-.01	.31*
Granovsky	.09						
High		.03	.09	.15	.10	.30*	.08
Medium		.16	.00	-.19	.21	.06	-.06
Low		.06	.20	.17	-.09	-.06	.21

*p < .05

**p < .01

***The N in each of the subgroup correlations was approximately 50.

TABLE 7

CORRELATIONS BETWEEN BODY-SATISFACTION AND ATTITUDES TOWARD DISABILITY

		Moderator					
		A	B	C	D	E	F
		Field- Independence (FI)**	Social Conformity (SC)	Authori- tarianism (A)	Ego- Strength (ES)	Body- Concern (BC)	Social Desirability (SD)
Overall Correlation (N=150)							
ATDP	.20*						
High		.10	-.02	.31*	.02	.15	.10
Medium		.30*	.46**	.26	.20	.35*	.15
Low		.16	.23	.01	.18	.16	.10
Granofsky	.16*						
High		-.24	.01	.20	.29*	.23	.21
Medium		.38**	.21	.04	.11	.29*	.24
Low		.22	.20	.19	.05	-.01	.10

*p < .05

**p < .01

***The N in each of the subgroup correlations was approximately 50.

TABLE 8
CORRELATIONS BETWEEN BODY-CONCERN AND ATTITUDES TOWARD DISABILITY

		Moderator					
		A	B	C	D	E	F
		Field- Independence (FI)***	Social Conformity (SC)	Authori- tarianism (A)	Ego- Strength (ES)	Body- Satisfaction (BS)	Social Desirability (SD)
Overall Correlation (N=150)	-.02						
ATDP							
High		.04	-.17	.02	.09	.16	.37**
Medium		-.17	.14	.05	.07	-.29*	-.25
Low		.04	-.08	-.15	-.20	.04	-.15
Granofsky	-.10						
High		-.05	-.24	-.07	.06	.09	.06
Medium		-.18	-.01	-.18	-.01	-.21	.02
Low		-.09	-.07	-.10	-.36*	-.21	-.27

*p < .05

**p < .01

***The N in each of the subgroup correlations was approximately 50.

TABLE 9
CORRELATIONS BETWEEN SOCIAL DESIRABILITY AND ATTITUDES TOWARD DISABILITY

	Overall Correlation (N=150)	Moderator					
		A Field- Independence (FI)***	B Social Conformity (SC)	C Authori- tarianism (A)	D Ego- Strength (ES)	E Body- Satisfaction (BS)	F Body- Concern (BC)
ATDP	.22*						
High		-.02	.17	.44**	.06	.19	.44**
Medium		.43**	.38**	.06	.18	.16	.19
Low		.29*	.18	.15	.33*	.27	.10
Granofsky	.10						
High		-.02	.10	.20	-.02	.21	.28*
Medium		.09	.19	.01	.21	.06	-.02
Low		.22	.01	.18	.04	.01	.05

*p < .05

**p < .01

***The N in each of the subgroup correlations was approximately 50.

correlations of .28 ($p < .05$) between the ATDP scale and ego-strength and of .15 between the Granofsky and ego-strength are found. For subjects who are moderately authoritarian, the relationship changes to a negative one (-.09 correlation with ATDP, -.19 with Granofsky). In the final subgroup, composed of low authoritarians, the relationship reverts to one that is very similar to that of the high authoritarian group. In this instance, correlations of .27 ($p < .05$) and .17 are found between the ego-strength scale and the ATDP and Granofsky respectively.

Thus, the moderator in this instance was instrumental in eliciting a pattern in the relationship between the predictor and criteria that added considerable informational value to the original overall correlation.

Since the plan of the present study was to develop more refined hypotheses of the relationships between the various predictors and criteria on the basis of the original sample, any discussion or attempted explanation of the findings at this point will be very limited. Rather, the current emphasis will be on the presentation of the hypotheses resulting from this sample, with comments of an elaborative or explanatory nature being presented as appears appropriate in the course of stating the refined hypotheses.

The hypotheses, which are listed below, represent significant interactions between various predictors and at least one of the criterion instruments in the initial sample. That is, the correlations that were found to be statistically significant have been selected from the

data and restated in the form of hypotheses to be re-evaluated in the cross-validation sample. They are as follows:

1. Social conformity (Table 4) is negatively related to attitudes toward disability when the non-disabled individual is characterized by either of the following: (a) Moderate body-concern, (b) Moderate field-independence.

2. Body-satisfaction (Table 7) is positively related to attitudes toward disabled people when the non-disabled individual is characterized by the following: (a) High ego-strength, (b) Moderate body-concern, (c) Moderate field-independence, (d) Moderate social conformity, (e) High authoritarianism.

3. Ego-strength (Table 6) is positively related to attitudes toward disabled people when the non-disabled individual is characterized by the following: (a) High field-independence, (b) Low authoritarianism, (c) Low social conformity, (d) Moderate body-satisfaction, (e) High body-concern, (f) High authoritarianism. Also, a significantly positive relationship between ego-strength and attitudes toward disability is associated with low social approval needs (as shown by low scores on the social desirability scale).

4. Authoritarianism (Table 5) is negatively related to attitudes toward disabled people when the non-disabled person is characterized by the following: (a) Moderate field-independence, (b) Low field-independence, (c) Low ego-strength, (d) Moderate body-satisfaction, (e) Low body-satisfaction, (f) Moderate body-concern, (g) Moderate social conformity, (h) Low social conformity, (i) High ego-strength.

5. Body-concern and anxiety (Table 8) is negatively related to attitudes toward disability when the non-disabled individual is characterized by the following: (a) Low ego-strength, (b) Moderate body-satisfaction, Body-concern was found to be positively related to attitudes toward disability when the non-disabled was characterized by high social approval needs (reflected in the tendency to score highly on the social desirability scale).

6. Field-independence (Table 3) is positively related to attitudes toward disability when the non-disabled individual is characterized by the following: (a) Moderate ego-strength, (b) Moderate body-concern (c) High Authoritarianism. Low social desirability response tendencies are also associated with a positive relationship between this predictor and the criteria.

The social desirability response tendency (Table 9) was found to be positively related to attitudes toward disability when the non-disabled individual was characterized by: (a) Moderate social conformity, (b) Moderate field-independence, (c) Low field-independence, (d) Low ego-strength, (d) High authoritarianism. Thus, a positive, significant correlation between social desirability and attitudes toward disability would seem to be associated with the basically "unhealthy" poorly integrated individual who behaves in an acceptant manner because of his need for social approval rather than for any genuine interest in the welfare of the disabled.

It appeared that one subgroup of each of the moderator variables was particularly effective in enhancing the relationship between the

predictors and criterion. For example, the characteristic of being moderate in degree of field-independence was associated with a significant negative correlation between social and conformity and attitudes toward disability, and significant positive correlations between this criterion and body-satisfaction, authoritarianism, and social desirability motives. Other medium subgroups which proved effective were those of social conformity, body-concern, and body-satisfaction. Ego-strength and social desirability were the variables whose low subgroups resulted in more significant relationships than their high or medium subgroups. Authoritarianism was the only variable in which the high subgroup was most important in precipitating significant correlations.

CHAPTER VII

RESULTS OF CROSS-VALIDATION SAMPLE

As has been previously stated, the primary purpose of the second cross-validation sample was to evaluate the hypotheses which had been developed on the basis of the initial sample. Thus, the major focus of this chapter is the presentation of data pertinent to the interactive hypotheses which were stated in Chapter VI.

Rather than presenting the complete moderator analysis of the cross-validation sample in this chapter, as was done for the initial sample in the previous chapter, only those interactions which were found to be significant in the initial analysis and restated as hypotheses are examined. The complete analysis can be found in Appendix D.

In this second moderator analysis, 37 subgroup correlations of a possible 252 were found to be significant at the .05 level. Of these 8 were significant at the .01 level. Although these figures are somewhat smaller than those presented following the analysis of the initial sample, they are considerably larger than the number of significances that would be expected by chance (13 at the .05 level, 3 at the .01 level). The smaller number of significances was in fact predicted because of the more stringent criteria for significance due to the smaller sample size in this sample.

The data comparing the relationships that were found to be

significant in the initial sample with those same relationships in the cross-validation sample are found in Table 10. Of the 40 hypotheses resulting from the 49 significant correlations found in the first sample, 12 were supported in the second sample. Eight of these supported hypotheses had authoritarianism as a predictor, thus reinforcing the initial sample's finding that it was the most important of the 5 personality constructs, and thus of the 5 respective theoretical approaches in predicting attitudes toward disability. Since an assumption of this study was that the two criterion measures were viewed as two aspects of the same thing (attitudes toward disabled people) rather than as 2 independent, separate criteria, a significant correlation between a predictor and either of the 2 criterion instruments in the initial sample was considered to be supported if that predictor was found to be significantly related to either of those instruments in the second sample. An example of this is found in Table 10, Section A. In the initial sample, social conformity was found to be significantly related to attitudes toward disability, as measured by the Granofsky Pictures, when the individuals were characterized by medium body-concern. In the cross-validation sample, social conformity was once again found to correlate significantly with attitudes toward disability under that particular moderating condition, but in this instance the ATDP Scale was the criterion instrument with which it was significantly related. Although the predictor correlated significantly with different criterion instruments in the two samples, the hypothesis generated in this instance was considered to be supported.

It can be seen upon examining Table 10, Section A, that both hypotheses concerning the relationship of social conformity to attitudes toward physically disabled people were supported. Thus, it can be stated with some degree of confidence that the degree of social conformity which is present in individuals who are moderately concerned about their bodies or who are neither strongly nor minimally dependent on their perceptual field for behavioral direction, is inversely related to their attitudes toward disability. That is, for these individuals, low social conformity needs would be associated with positive attitudes toward the disabled, and strong needs for conformity would be indicative of aversion and discrimination of them.

In addition, 8 subgroup correlations involving social conformity were found to be significant in the second sample that were not significant in the initial one. Since they cannot be given as much weight as those correlations found to be significant in both samples, they will not be examined in detail. This finding is mentioned primarily to emphasize the extent to which this variable increase in predictive importance in the second sample. The complete list of correlations can be found in Appendix D.

In contrast to these results, none of the 5 hypotheses relating body-satisfaction to attitudes toward disability were supported by the cross-validation data. This is shown in Section B of Table 10. In fact, the overall positive relationship that was found between the Body-Cathexis Scale and the criterion in the initial sample, and which is shown in the correlation matrix of that sample (Table 2), was

TABLE 10

A COMPARISON OF RELATIONSHIPS FOUND TO BE SIGNIFICANT IN THE INITIAL SAMPLE WITH THOSE RELATIONSHIPS UNDER THE SAME MODERATOR CONDITIONS IN THE CROSS-VALIDATION SAMPLE

Predictor	Moderating Condition	Initial Sample	Cross-Validation Sample	Criterion Instruments
A. Social Conformity	Medium Body-Concern	-.20	-.44*	ATDP (S)***
		-.27*	-.13	Granofsky
B. Body-Satisfaction	Medium Field-Independence	-.06	-.42*	ATDP (S)
		-.28*	-.06	Granofsky
	Medium Social-Conformity	.46**	.15	ATDP (N)
		.21	.09	Granofsky
C. Ego-Strength	High Ego-Strength	.02	-.11	ATDP (N)
		.29*	-.34	Granofsky
	High Authoritarianism	.31*	-.16	ATDP (N)
		.20	-.10	Granofsky
	Medium Body-Concern	.35*	-.26	ATDP (N)
		.29*	.01	Granofsky
	Medium Field-Independence	.30*	-.16	ATDP (N)
		.38**	-.23	Granofsky
	Medium Social Conformity	.27*	.18	ATDP (N)
		.01	-.26	Granofsky
	Low Social Conformity	.32*	.26	ATDP (N)
		.20	.33	Granofsky

D. Authoritarianism	Medium Body-Satisfaction	.44** .21	-.22 -.14	ATDP Granofsky (N)
	High Authoritarianism	.28* .15	-.01 .10	ATDP Granofsky (N)
	Low Authoritarianism	.27* .17	.01 .05	ATDP Granofsky (N)
	High Body-Concern	.29* .30*	-.12 .04	ATDP Granofsky (N)
	Medium Body-Concern	.37** .06	.26 -.10	ATDP Granofsky (N)
	High Field-Independence	.28* .03	.36* .15	ATDP Granofsky (S)
	Low Social Desirability	.31* .21	.32 -.04	ATDP Granofsky (N)
	Medium Social Conformity	-.44** -.27	-.41* -.10	ATDP Granofsky (S)
	Low Social Conformity	-.38** -.31*	-.43* -.31	ATDP Granofsky (S)
	Medium Body-Satisfaction	-.49** -.43**	.23 -.05	ATDP Granofsky (N)
	Low Body-Satisfaction	-.31* -.04	-.55** -.45*	ATDP Granofsky (S)
	High Ego-Strength	-.22 -.39**	-.51** -.39*	ATDP Granofsky (S)
	Low Ego-Strength	-.41** -.33*	.02 -.13	ATDP Granofsky (N)

TABLE 10—Continued

Predictor	Moderating Condition	Initial Sample	Cross-Validation Sample	Criterion Instruments
E. Body-Concern	Medium Body-Concern	-.53** -.39**	-.37* -.06	ATDP Granofsky (S)
	Medium Field-Independence	-.47** -.36*	-.56* -.19	ATDP Granofsky (S)
	Low Field-Independence	-.31* -.23	-.05 -.42*	ATDP Granofsky (S)
	Medium Social Desirability	-.28* -.19	-.59** -.29	ATDP Granofsky (S)
	Low Social Desirability	-.54** -.32*	-.14 -.26	ATDP Granofsky (N)
	Medium Body-Satisfaction	-.29* -.21	-.04 -.36*	ATDP Granofsky (S)
	Low Ego-Strength	-.20 -.36*	.01 .04	ATDP Granofsky (N)
	High Social Desirability	.37* .06	-.06 -.60**	ATDP Granofsky (N)
	Medium Ego-Strength	.30* .11	-.13 -.14	ATDP Granofsky (N)
	High Authoritarianism	.31* .21	-.21 .17	ATDP Granofsky (N)

G. Social Desirability	Medium Body-Concern	.32* .01	.06 .10	ATDP Granofsky	(N)
	Low Social Desirability	.41** .20	-.01 .28	ATDP Granofsky	(N)
	Medium Field-Independence	.43** .09	.29 -.10	ATDP Granofsky	(N)
	Low Field-Independence	.29* .22	.05 -.38*	ATDP Granofsky	(N)
	Medium Social Conformity	.38** .19	.31 .06	ATDP Granofsky	(N)
	High Authoritarianism	.44** .20	.13 .32	ATDP Granofsky	(N)
	Low Ego-Strength	.33* .04	.29 .02	ATDP Granofsky	(N)
	High Body-Concern	.44** .28*	.12 -.01	ATDP Granofsky	(N)

*p < .05

**p < .01

***The "S" in this instance indicates that the hypothesis developed on the basis of the subgroup (moderator) correlation was supported. When the hypothesis was not supported, an "N" is present.

TABLE 11

NINE-VARIABLE CORRELATION MATRIX OF THE CROSS-VALIDATION SAMPLE (N=90)

	1	2	3	4	5	6	7	8	9
1									
2	-.14								
3	-.17	.59**							
4	.02	-.28**	-.27**						
5	-.12	.10	.20	.23*					
6	.06	.01	.06	-.10	.01				
7	-.01	-.05	-.01	.24*	.15	-.10			
8	.02	-.24*	-.32**	.10	-.08	-.08	.12		
9	.13	-.21*	-.26*	.07	-.07	-.18	.22*	.25*	

*p < .05

**p < .01

1. Field-Independence
2. Social Conformity
3. Authoritarianism
4. Ego-Strength
5. Body-Satisfaction

6. Body-Concern
7. Social Desirability
8. Attitudes Toward Disabled People
9. Granofsky Pictures Test

reversed in the second sample. It can be seen in Table 11, which contains the correlation matrix of the cross-validation sample, that body-satisfaction correlated $-.08$ with the Granofsky Pictures and $-.07$ with the ATDP Scale in that sample. This is contrasted with its correlations of $.20$ and $.16$ with the respective criterion instruments in the initial sample. This finding suggests that conscious satisfaction with one's body is either not related in any meaningful way to one's attitude toward disability or that an individual's rating of his body is confounded by so many factors that it is unlikely that an adequate, relatively "pure" measure of this relationship can be obtained. Since the results will be discussed in detail in Chapter VIII, any attempts to account for the results of this study in the present chapter will be minimal. However, it can be stated on the basis of the instruments used that no relationship appears to exist between conscious satisfaction with one's body and attitudes toward the physically disabled.

A similar conclusion is easily reached with regard to the relationship between ego-strength and the criterion, as only one of nine hypotheses developed from the initial sample was supported by the cross-validation sample (Table 10, Section C). Thus, ego-strength, as represented by Barron's scale, appears to be of minimal value in predicting attitudes toward disability. On the basis of the cross-validation findings with the respective instruments, it would appear that only in the case of highly field-independent individuals would degree of ego-strength be an effective predictor of acceptance of disability.

Consistent with previous findings in the initial sample (correlation

matrix, canonical loadings, moderator analysis) authoritarianism remains the most reliable predictor of attitudes toward disability, that is, high authoritarianism has been consistently found to be negatively related to attitudes toward disabled people. Of the 11 hypotheses developed from the initial sample relating this predictor to the criterion measures, 8 were supported by the cross-validation data (Table 10, Section D). These data suggest that individuals who are characterized by low body-satisfaction and a moderate degree of anxiety and concern about their bodies, a tendency toward field-independence, a tendency toward having low social conformity needs, and high ego-strength, would express attitudes toward disability which would be inversely related to the degree of authoritarianism that they could be characterized by. Thus, for these individuals, a low degree of authoritarianism would be associated with positive attitudes toward the disabled. Conversely, high authoritarian tendencies would suggest negative, aversive attitudes on their part.

Of the three hypotheses relating body-concern, as measured by Secord's Homonym Test, to attitudes toward disability, one was supported. Thus, this variable, as in the cases of body-satisfaction and ego-strength, appears minimally important as a predictor of attitudes. Only when individuals are moderate in the extent to which they are consciously satisfied with their own bodies, is unconscious somatic concern negatively related to attitudes toward individuals with a physical disability. (Section E of Table 10).

None of the four hypotheses generated by the final predictor

(field-independence) were supported by the data of the cross-validation sample, suggesting that no consistent relationships exist between this variable as it is measured here and attitudes toward disability. Also, none of the statistically significant subgroup correlations between social desirability and the criteria that were found in the initial sample were supported in the second sample. On this basis, it would appear that there is an absence of any consistent interactive relationships between this control instrument, the predictors, and the criterion instruments. It should be noted, however, that the social desirability scale was found to have a significant overall correlations ($r = .22$, $p < .05$) with the Granofsky Pictures Test in the cross-validation sample (Table 11). Thus, whereas in the initial sample it appeared as if the ATDP scale might have been susceptible to this response bias since it correlated significantly with the Marlowe-Crowne scale in that sample, the Granofsky appears more likely to have been influenced by it in the second sample.

As in the initial sample, the Barron Ego-Strength Scale was found to correlate significantly with the Social Desirability Scale. As is shown in the matrix of the cross-validation sample, the correlation in this instance was $.24$ ($p < .05$). Thus, once again this variable's relationships with other variables must be evaluated in light of its apparent vulnerability to the social desirability response tendency. Since the Granofsky Test and Barron's E-S Scale are the only two instruments to correlate significantly with social desirability in the second sample, it would appear as if the influence of this control variable is

not extensive in that sample.

Other than the significant correlation found between social desirability and the Granofsky Pictures, only two of the predictors were found to be significantly related to attitudes toward disability. The strongest relationships between any predictor and criterion were once again found to involve authoritarianism as the predictor. In the cross-validation sample, correlations of $-.32$ ($p < .01$) between the California F Scale and the ATDP Scale and of $-.26$ ($p < .05$) between it and the Granofsky were found. These results are extremely consistent with the overall correlations between the measure of authoritarianism and the two criterion instruments that were reported in the initial sample.

Social conformity was also found to correlate significantly overall ($p < .05$) with both criterion instruments ($r = -.24$ with the ATDP; $r = -.21$ with the Granofsky). The findings of the correlation matrix of the cross-validation sample together with the findings derived from the moderator analysis of that sample suggest that this instrument may possess considerably more predictive power than was shown on the basis of the initial sample.

Body-satisfaction, ego-strength, and field-dependence, all of which were to some degree significantly related to the criteria in the initial sample, were not found to possess overall significant correlations with either criterion instrument in the cross-validation sample. Thus, the tentative importance attributed to these variables as predictors of attitudes toward the disabled in the initial sample must be

considered to be considerably diminished by the results of the overall correlations in the second sample. These findings are consistent with the previously discussed findings of the moderator analysis, as only 1 of 18 interactive hypotheses having one of these 3 variables as a predictor was supported by the data of the second sample.

Once again, the largest correlation between any 2 predictors was that between conformity and authoritarianism. The overall correlation between these variables was .59 ($p < .01$), an even higher correlation than was present in the initial sample, thus providing further evidence to support the theory of Adorno, et al. Significant negative correlations (both $p < .01$) were noted between each of these variables and ego-strength (-.28 between social conformity and ego-strength; -.27 between authoritarianism and ego-strength). These findings are also consistent with predictions which would follow from the various theoretical points of view (e.g., Adorno, et al., 1950; Siller, 1963a). A significant positive correlation ($p < .05$) was also found between ego-strength and body-satisfaction ($r = .23$). A similar finding with these two variables was reported in the initial sample, and, as in that sample, the possibility that the social desirability response set may confound the relationship must be considered likely, as they both correlate reasonably highly with Marlow-Crowne's scale (body-satisfaction = .15; ego-strength = .24). However, the significant correlation between these two predictors is also in line with previous findings and predictions (Barron, 1953a; Secord and Jourard, 1953).

A maximum canonical correlation of .46 ($p < .001$) resulted from the

cross-validation sample, indicating that the predictors in this sample, as in the initial sample, relate to the criteria in at least one significant way. A second pair of linear combinations was computed and the resulting canonical correlation was .15, which is not significant at the .05 level.

The contribution which each variable made to the significant canonical correlation is presented in Table 12. Although authoritarianism and social desirability are once again the variables with the largest absolute loadings, several of the variables can be seen to have changed markedly in the extent to which they contribute to the prediction of attitudes toward disability.

TABLE 12
CANONICAL VECTORS OF THE
CROSS-VALIDATION SAMPLE

Predictors	Criteria
-.64 Authoritarianism	.69 Granofsky Pictures
.48 Social Desirability	.56 ATDP
-.30 Body-Concern	
-.21 Social Conformity	
-.12 Ego-Strength	
.09 Field-independence	
-.09 Body-Satisfaction	

For example, body-concern and social conformity are much heavier weighted, relative to the other predictors, than they were in the

initial sample (Table 1). This finding with regard to social conformity is consistent with data previously discussed (correlation matrix, moderator analysis) relevant to the second sample, in which this variable was shown to relate relatively strongly to the criteria.

Field-independence and body-satisfaction, also consistent with previous findings in the cross-validation sample, have been shown to be weighted less heavily, relative to the other predictors, in this sample.

As was stated earlier, authoritarianism remains the primary variable in this analysis in predicting attitudes toward disability, thus reinforcing the findings of all previous analyses in both samples. The high loading assigned to social desirability suggests once again that the best positive predictor of the criteria may be the degree of which an individual responds in a manner designed to gain social approval and acceptance for oneself.

Also shown in Table 12, is the reversal in importance of the two criterion instruments. A substantial decline in the weighting of the ATDP scale together with an even larger increase in the weighting of the Granofsky Pictures has resulted in a slightly larger loading for the latter instrument. It should be noted that in both samples, the criterion instrument that was found to be more strongly related to social desirability, as shown by the respective correlation matrices, received the higher canonical loading.

The major findings that have been presented thus far are summarized below. These results will be dealt with in detail in Chapter VIII.

1. The predictors have been shown to relate significantly to the criterion instruments, suggesting that the personality constructs, as represented by the various instruments, are important in the prediction of attitudes on the part of non-disabled individuals toward the physically disabled.

2. Authoritarianism, as it is measured in this study, has been consistently shown to be the best single predictor of attitudes toward physical disability.

3. The social desirability response bias has been found through the canonical analyses to be a major determinant of subjects' responding on the various instruments, including those measuring the expression of attitudes toward disabled people. However, no consistent interaction between this control variable, any of the predictors, and criteria were found.

4. Social conformity and body-concern were found to possess considerable predictive importance in the second sample, although neither was considered important in this respect on the initial sample. The opposite is true for body-satisfaction and field-independence.

5. Authoritarianism was found to relate most strongly to attitudes toward disability when the non-disabled individual is characterized by: (a) a low degree of conscious satisfaction with his body, (b) a moderate degree of unconscious somatic concern, (c) minimal field-independence, (d) moderate to low social conformity needs, (e) high ego-strength.

6. Social conformity was found to be inversely related to attitudes

toward disabled people when the non-disabled are characterized by:

(a) moderate body-concern, (b) moderate field-independence.

7. The strongest relationship between any of the predictors was that between authoritarianism and social conformity. Other significant overall correlations were between authoritarianism and ego-strength, social conformity and ego-strength, and body-satisfaction and ego-strength.

CHAPTER VIII

DISCUSSION

As has been evident throughout chapters VI and VII, the most consistent finding present in the data is that the degree of authoritarianism on the part of the non-disabled is an extremely reliable predictor of attitudes toward physically disabled people. That is, it has been found in every measure of this relationship utilized in the present study that individuals who could be described as highly authoritarian are likely to harbor and express negative, aversive, discriminatory attitudes toward the disabled. Conversely, as individuals are characterized by increasingly less authoritarianism, their reactions to disability can be characterized as increasingly positive and acceptant. Although some rationale into why this inverse relationship had been predicted has previously been given, it appears appropriate to review the theory leading to this prediction at this time.

Two prominent individuals within the field of rehabilitation who have been concerned with psychological aspects of disability and who have felt that degree of authoritarianism is the important determiner of attitudes toward disability are Dembo and Gellman. Although these theorists use somewhat differing terms in discussing the dynamics of the non-disabled-disabled interaction, it is clear that they are referring to quite similar concepts. Thus, whereas Dembo, et al. (1956), label the process "devaluation," Gellman (1959, 1960) terms it

"prejudice." Both of these theorists appear to be describing the dynamics of authoritarianism as it was originally formulated by Adorno, et al. (1950), in The Authoritarian Personality in their explanations of discrimination practiced toward the disabled.

In applying the insights of Adorno and his colleagues to the situation with disabled people, it is certainly not difficult to conceive of the disabled as a minority group which would be avoided, or held in contempt, by those individuals who need to be associated with "the strong" or the influential in our society. It is obvious that the individual who possesses a visible physical disability is "weak" in a more concrete, functional sense than are any of the minority groups, such as Negroes or Jews, which Adorno considered. Besides the data supporting this notion derived from the present study, at least one other recent finding has suggested that physically disabled people can be viewed as a minority group, subject to aversion and discrimination from the power-oriented members of society.

This is the study by Chesler (1965) in which he developed an Intergroup Relations Scale to measure attitudes towards various minorities and then correlated it and its separate subscales with the ATDP Scale. In every instance there was a significant relationship between subjects' attitudes toward the various minorities and toward physically disabled people. In each case, aversive, negative attitudes toward disability were associated with discriminatory, hostile attitudes toward the various minorities. These findings were seen by the author of that study as suggesting that attitudinal and behavioral predispositions

which are usually associated with religious, social class, and ethnic minorities. That is, disabled people might best be viewed, for the sake of research and rehabilitation, as a minority group.

Thus, the findings of the present study are consistent with Chesler's views of the status and stimulus value of disabled people and with Adorno, et al.'s earlier, broader formulation of the status and stimulus value of minority groups. It would appear from the data of this study that the aversive attitudes which many non-disabled people have toward disability could best be explained in terms of authoritarianism, thus placing the disabled in the role of a minority group.

Beyond showing that authoritarianism is a reliable, valid predictor of attitudes toward disability, the present study has examined more subtle relations within the personality of the non-disabled in order to better predict when discriminatory attitudes may be expressed. Certain interactions between a predictor such as authoritarianism and various moderating "conditions" (more accurately described as aspects of personality) have been isolated which have resulted in a somewhat more refined, life-like manner of viewing the determinants of an attitude and of predicting when those determinants will most likely lead to an expression of the attitude. The term "life-like" is used here because it is felt that the expression of an attitude in everyday life is not the direct result of a single variable, but rather the function of a subtle interaction of many variables. The closer this can be approximated in experimental analysis, the more it corresponds to life

situations. It is felt that the predictive interactions derived in this study represent a closer approximation of reality than has been attained in previous work in this area.

Thus, there have been found in the present study to be certain conditions under which an individual could be predicted to be highly authoritarian, therefore, responding in a negative manner to a visibly disabled individual, and when an individual could be predicted to be low in authoritarian tendencies, therefore, responding positively toward such an individual. The first of these conditions occurs when the non-disabled individual is characterized by high ego-strength. Thus, when an individual can be described as manifesting "the capacity for personal organization" as Barron defined ego-strength and felt that his scale was a measure of one's attitude toward disability would be predicted to be inversely related to the extent to which he could be described as authoritarian. Since a lack of ethnic prejudice was one of the cardinal characteristics which Barron attributed to individuals possessing adequate ego-strength, it would seem reasonable that the significant interaction found here between high ego-strength, authoritarianism, and attitudes toward disability is applicable to the individual low in authoritarianism rather than the highly authoritarian person. That is, when an individual is found to possess high ego-strength, it could be predicted with some degree of confidence that he would be relatively low in authoritarian tendencies, and, therefore, would express positive, accepting feelings in relation to disabled people. This prediction is partially borne out by the significant inverse correlation

found between ego-strength and authoritarianism in the cross-validation sample (Table 11).

A second condition resulting in a significant inverse relation between authoritarianism and expressed attitudes toward disabled people is that in which individuals are characterized by medium to low social conformity needs. To rephrase this statement, the data suggests that individuals who tend to be somewhat lacking in needs to conform to society's demands would express attitudes inversely related to the degree of authoritarianism by which they could be characterized. Since conformity and authoritarianism have been theorized to be positively related (Adorno, et al., 1950) and subsequent studies have borne this out (Bass, 1956; Shaw, 1961; Vaughn and White, 1966), it follows that lack of conformity should be positively related to a lack of authoritarian tendencies. Thus, on the basis of logic and theoretical rationale, it would seem that this moderating condition is associated with low, rather than high, authoritarianism. It would follow, then, that individuals characterized by low social conformity needs would also be characterized by low authoritarianism, therefore, being predicted to express positive attitudes toward disability. The large overall correlation found between social conformity and authoritarianism in the second sample lends considerable support to this prediction.

A third condition resulting in a significant negative relationship between degree of authoritarianism and attitudes toward disability is that in which individuals are characterized by low field-independence. Thus, as individuals tend to become increasingly field-dependent, the degree to which they could be characterized as authoritarian would be

predicted to be inversely related to their attitudes toward disability. Once again, in order to be theoretically and logically consistent, individuals who are characterized by low field-independence should also be characterized by high authoritarianism, as both have been termed "unhealthy" and predictive of negative attitudes toward the disabled. This prediction is not supported by the data, as no significant relationship was found to exist between authoritarianism and field-independence in the cross-validation sample.

Body-concern and body-satisfaction will be discussed together as the fourth moderating condition which is associated with a significant inverse correlation between degree of authoritarianism and attitudes toward the disabled. Since these variables represent at different levels the way a non-disabled individual regards his body, it is felt that they can be meaningfully discussed together.

The findings suggest that when an individual is characterized by a low degree of conscious body-satisfaction or a moderate degree of unconscious concern about his body, his attitudes toward the disabled will be inversely related to the degree to which he is characterized by authoritarian tendencies. In order to be consistent with previous findings and hypotheses, individuals who are low in body-satisfaction should tend to be highly authoritarian, therefore, expressing negative attitudes toward disability. With regard to the condition of moderate body-concern the prediction cannot be as clear-cut. That is, since individuals who are moderately concerned with their bodies are not classified in either extreme in this regard, it is difficult to predict

In which direction their attitudes will lie.

Since no significant correlations were found between authoritarianism and either body-concern or body-satisfaction in the second sample, no prediction in either direction was supported for either of these two variables. The findings with regard to body-satisfaction were contrary to predictions, as a positive relationship between this variable and authoritarianism was found.

The fifth and final condition resulting in a significant inverse relationship between authoritarianism and the criterion arises when the non-disabled individual is characterized by moderate social desirability needs. Once again, no significant relationship was found between this moderator and authoritarianism, thus not allowing prediction of degree of authoritarianism from the knowledge of the particular moderating condition.

Before continuing with the results pertaining to the other predictors, it appears reasonable at this point to summarize the findings with respect to authoritarianism. It can be stated with considerable confidence that the degree of authoritarian tendencies present within an individual is a reliable predictor of the type of attitude that individual will possess in relation to physically disabled people. It has been consistently found that the attitudes of non-disabled individuals toward the disabled are inversely related to the degree of authoritarianism characteristic of the non-disabled. Thus, individuals who would be considered to be highly authoritarian would be predicted to express negative, discriminatory attitudes toward disability and low

authoritarians would be predicted to be acceptant and positive in their dealings with the disabled.

By arriving at measures of certain other aspects of the personality of the non-disabled, it is possible to predict how this predictor is operating, that is, whether a non-disabled person is characterized by high or low authoritarianism and thus whether he will express positive or negative attitudes toward disability. For example, support was given to the prediction that high ego-strength and low needs for social conformity are associated with low authoritarian tendencies. Predicted relationships between field-independence, body-satisfaction, body-concern, and authoritarianism were not supported.

As was stated in Chapter VII, social conformity appeared to be the variable which was second in predictive importance to authoritarianism. This conclusion was based on its overall significant correlations with both criterion instruments, its relatively high loading among the canonical variates, and the number of significant moderator correlations, including the two which were found to be significant in the initial sample, and cross-validated. As with authoritarianism, this variable was found to be negatively related to attitudes toward disability. Individuals who are characterized by strong cultural conformity needs are predicted to express negative attitudes toward physically disabled people, whereas the opposite attitude would be predicted of low conformists.

It is felt that, consistent with Adorno, et al.'s formulations, this variable was measuring to some degree what authoritarianism was measuring, and thus may be considered to be reflecting similar dynamics

to those which have been previously discussed with regard to that variable. The correlations found between these two variables in the present study (.46 in the initial sample, .59 in the cross-validation sample) provide empirical support for this notion. Similar findings have been reported by Vaughn and White (1966), who, in commenting on the relationship between these variables, state: "Connotations of rigidity and narrowmindedness go with the authoritarian syndrome, and these relate also to the personality of the high conformer."

At a more parsimonious level, it has been shown that the California F Scale capitalizes on whatever acquiescence set exists on the part of the subject, and the Bass Social Acquiescence Scale is a measure of the strength of acquiescence tendencies that the subject possesses. Since both scales are loaded to a considerable extent on the acquiescence variable, it is reasonable that they would correlate fairly strongly with each other.

The larger correlation between social conformity and authoritarianism in the second sample may account somewhat for the increase in predictive importance shown for this conformity variable in that sample. Since both interactive hypotheses which were developed for this variable in the initial sample were supported in the cross-validation sample, these relations would appear to be of at least empirical significance. As with authoritarianism, then, there have been found to be certain moderating "conditions" which result in a significant, inverse relation between social conformity and attitudes toward disability.

The first of these moderating conditions occurs when the non-

disabled individual is characterized by moderate concern about his body. To rephrase and expand this statement, it has been found that when non-disabled individuals are characterized by moderate body-concern, the degree to which they could be considered socially conforming is negatively related to their attitudes toward disabled people. If they are considered highly conforming, the attitude would be an aversive, negative one; if they are considered low in conformist tendencies, the attitude would be predicted to be one of acceptance and warmth. Since no significant correlation was found to exist between social conformity and body-concern in the second sample, it is impossible to predict to what extent an individual could be described as socially conforming from the knowledge that he has a moderate amount of body-concern.

The second moderating condition for the conformity variable exists when the non-disabled individual is characterized by moderate field-independence. As with the preceding condition, when the individual is characterized by moderate field-independence, the degree to which he possesses to conform socially is negatively related to his attitude toward the physically disabled. Once again, the lack of significance between social conformity and this moderator, as shown in Table 11, indicates that prediction of subjects' standing on the predictor (Social Conformity) cannot be made from the knowledge that they are moderately field-independent.

To summarize the findings with regard to the variable of social conformity, it has been shown to be inversely related to the criterion,

although the relationship is not as strong as that of authoritarianism with the criterion. Therefore, individuals who are high in social conformity would be predicted to react aversively toward the disabled whereas those low in social conformity would be predicted to respond acceptantly toward them, although in neither instance would the prediction be as reliable as when authoritarianism is the predictor.

When subjects are moderately concerned about their bodies or moderately field-independent, the inverse relationship between conformity and the criterion is particularly likely to exist. However, no valid predictions can be made of the degree of social conformity by which a subject is characterized solely from the knowledge that he is moderately body-concerned or field-independent.

Although neither ego-strength nor body-concern were found to correlate significantly with the criterion in the correlation matrix of the cross-validation sample, both were significantly related to it under one moderating condition. That is, given a certain moderating condition, each of these instruments can be shown to predict attitudes toward disability.

When ego-strength is the predictor, the important moderating condition is field-independence. That is, when an individual can be described as being highly field-independent, the degree of ego-strength which he possesses is directly related to his attitude toward disabled people. Thus, the higher the degree of ego-strength on the part of the non-disabled, the more positive his attitude toward disability. Since high field-independence is considered to be a "health" characteristic,

It would be predicted that individuals placed in this category would be high in ego-strength as well, therefore, being likely to express positive attitudes toward the disabled. Since the overall correlation between ego-strength and field-independence in the cross-validation sample is not significant, this prediction is not supported.

Body-concern is also significantly related to the criterion under only one moderating condition. However, unlike ego-strength this variable is inversely related to the criterion under that condition, which in this instance is moderate body-satisfaction. Since body-concern and body-satisfaction are shown to be virtually unrelated in Table 11, no valid prediction can be made of subjects' relative standing on the variable body-satisfaction from the knowledge that they are moderate in body-concern.

Neither body-satisfaction, field-independence, nor social desirability were found to be consistently related to the criterion under any moderating conditions. That is, none of the interactive hypotheses developed as a result of the data from the initial sample with these variables as predictors were supported by the data of the cross-validation sample.

The general failure of body-satisfaction, field-independence, body-concern, and ego-strength to relate significantly to the criterion can be viewed as stemming from two possible sources. First, it is possible that none of these variables is related in a consistent manner to attitudes toward disability. This assumes that each of the above variables, and its corresponding hypothesis, was given a fair test in

this study. That is, it assumes that each variable was adequately represented by the instrument purporting to measure it, but that the variables in question were not meaningfully related to the criterion. If this were so it would suggest that the various theories which were responsible for attributing importance to that variable are deficient in some way, or at least their formulations of the dynamics involved are not applicable to the situation investigated by this study.

There is most probably some validity in viewing a portion of the results, or absence thereof, as indicating a lack of relationship between the variables. The variable of field-independence was never explicitly stated by any theorist to be important in attitudes on the part of the non-disabled people and thus may not validly represent the theorists from which it was derived. Rather, it was chosen as a result of the interpretation by the experimenter of an apparently consistent body of literature which appeared to be best represented by this variable. Although it was felt at the time that the variable of field-independence adequately represented a certain number of attempts to account for differential behavior on the part of the non-disabled, the results would suggest that the interpretation could have been subject to error. Thus, it could be held that the interpretation was incorrect, that field-independence does not adequately reflect the communality of these studies, and thus could not be expected to predict attitudes toward disability.

It must also be admitted that problems of this nature exist in attempting to relate ego-strength to attitudes toward disability.

Since the range of individuals who have attributed importance to this variable in this situation is small, being primarily the result of Siller's writings, the difficulty is not that the concept must be representative of somewhat diverse points of view. Rather, the problem here is the adequacy of the concept "ego-strength." Herron (1962b) has discussed the lack of success with which this term has been defined. This presents an almost insurmountable barrier to measurement of the concept, as it is extremely difficult to develop a criterion for something which is not satisfactorily defined. Since this particular concept has proven so resistant to definition despite extensive usage over a long period of time, it may be considered a diffuse, catchall term corresponding to nothing in reality. This would make it unlikely that it would be capable of consistently predicting anything else in reality, including attitudes toward disability. If this is so, it would contra-indicate further research in the area of ego-strength, at least until a satisfactory definition of the term can be arrived at.

It would appear that neither body-satisfaction nor body-concern suffers from the difficulties mentioned above for field-independence and ego-strength. That is, no problem of definition exists, as was the case for ego-strength, and the selection of these variables did not involve an interpretation by the experimenter of a body of literature, as did field-independence. Thus, it appears that if it can be accepted that these two body variables were adequately represented by the instruments used to measure them, no consistent relationship exists between them and the criterion. This conditional statement brings up

the second possible explanation of the lack of significant findings with ego-strength, field-independence, body-satisfaction, and body-concern. This question is concerned with whether the variables in question are adequately represented by the various instruments. That is, given that the variables do exist and that they may or may not be meaningfully related to the criterion, there is still the question of whether the instruments are adequate measures of the variables in question, thus enabling a "fair" test of the hypotheses.

On the basis of the difficulties previously mentioned, the Barron Ego-Strength Scale appears most likely to inadequately measure the variable that it purports to measure. This follows from the fact that it has proven so resistant to adequate definition over such a long period of time. The probability that this concept can be validly measured must decrease in proportion to the degree to which it can be satisfactorily defined. There would seem to be little hope that any concept that has proven to be so complex, so diffuse, and so undefinable can be validly measured by a single, unidimensional scale. In a recent study which lends support to this hypothesis, Herron, et al. (1965), intercorrelated 9 ego-strength measures, found a minimal number of significant correlations, and concluded that there is "no such thing as objectively measurable ego-strength."

It would seem particularly difficult to discriminate between subjects on this basis in a sample like that of the present study, where gross psychopathology is virtually non-existent. The overwhelming majority of studies which have found this scale capable of discriminating

between subjects have been done with clinic populations. In samples such as the present one where the general adjustment level of the subjects is high, the scale may be unable to differentiate the more healthy from the less healthy.

Another factor interfering with this scale's measurement of ego-strength is its apparent susceptibility to the social desirability response set. This is shown in the matrices of both samples by the significant overall correlations found between this instrument and the Marlowe-Crowne Social Desirability Scale. Thus, rather than arriving at an unconfounded measure of relative health, or "capacity for personal organization," the scores obtained would appear to be confounded by the subjects' needs to present themselves in a socially desirable way. Once again, this tendency would appear to be related to the type of sample which is utilized. That is, a sample of "normal" college females should admit less readily to various psychopathological symptoms than a sample of clinic patients. This follows from the fact that they are apparently functioning more adequately and would have less need to be critical of themselves in this regard. It is also possible that the healthier subjects were more self-critical in this sample, being less defensive about attributing weakness to themselves, thus attaining lower scores than some less healthy subjects.

The Body-Cathexis Scale, the measure of body-satisfaction in this study, is also felt to show confounding with the social desirability response set, particularly so in the initial sample. In that sample, body-satisfaction correlated significantly with the Social Desirability

Scale and with both criterion instruments. In the cross-validation sample, this predictor was not found to be significantly related to social desirability and also was not found to relate significantly to either criterion instrument. Thus, it would appear that a large proportion of the relation between body-satisfaction and attitudes toward disability that was found in the initial sample could be accounted for in terms of the needs of the subjects to appear in a positive, enhancing light. This would indicate that this variable may not have been given a "fair test" in this study, indicating that the instrument used to measure it does not appear to have adequately represented it.

It should be noted that the Body-Cathexis Scale and the Ego-Strength Scale were the only predictor instruments which, on the basis of the overall correlations, were vulnerable to the social desirability response set. There was no socially desirable response that could be made to either the Homonym Test, the measure of body-concern, or the Chair-Window Test, the measure of field-independence, as in neither instance was the subject required to express an opinion, rate himself, or make any other type of response conducive to the expression of social desirability needs. The Body-Cathexis Scale and the Ego-Strength Scale were the only instruments in the battery in which subjects were required to rate themselves in any way.

Significant overall correlations were noted between the Social Desirability Scale and the ATDP Scale in the initial sample and between the Social Desirability Scale and the Granofsky Pictures Test in the cross-validation sample, suggesting that the criterion was somewhat

vulnerable to this response set throughout the study. That is, subjects' expression of attitudes toward disability in this study was confounded to some degree with their need to respond according to what they felt was the socially desirable way of responding. As an indication of its overall importance in this study, it has been shown that the social desirability variable received a weighting second in absolute magnitude only to authoritarianism, and first in magnitude among the positive weightings. The primary determinant of positive responding on the part of subjects is considered to be the need to respond in a socially desirable manner, rather than any "health" characteristic on their part.

It is felt that the primary manifestations of this confounding in the initial sample are found in the significant correlations between the Ego-Strength Scale and the ATDP Scale, between the Body-Cathexis Scale and the ATDP Scale, and between the Ego-Strength Scale and the Body-Cathexis Scale. Since all three of these instruments were found to be significantly related to the Social Desirability Scale in that sample, a significant correlation between any two of them would, therefore, seem to reflect to some degree correlations between different measures of social desirability rather than between the variables which were purported to be measured. The large weighting attained by the ATDP Scale in the initial sample, in relation to the second criterion measure, may also be accounted for by its significant relation to social desirability in that sample. That is, since the social desirability response set had such a pervasive influence among the predictors, the most heavily

weighted criterion instrument would be that one which was most likely to reflect this factor in its measures. This has been shown to be the ATDP Scale in the initial sample. It must be noted that the California F Scale was found not to relate to the Social Desirability Scale, but to relate significantly to both criterion measures, suggesting that this source of confounding did not affect the measure of authoritarianism, or its relation to the criterion, to any significant degree.

The degree of importance attributed to the social desirability variable in the initial sample was supported by very consistent findings in the cross-validation sample. Once again this response set was weighted second only to authoritarianism among the predictors and first among the variables with a positive weighting. This suggests that, as in the initial sample, the strongest determinant of responding in a positive, "health-oriented" direction was the need of the subjects to present themselves in an acceptable, socially enhancing light. Although only the Ego-Strength Scale and the Granofsky Pictures Test correlate significantly with the Social Desirability Scale in the second sample, its overall weighting was almost identical to that of the initial sample. The degree to which the relative weights of the two criterion instruments were influenced by the socially desirable responses set is clearly shown by the fact that whereas in the initial sample the ATDP Scale was weighted much more than the Granofsky Pictures Test, the latter is slightly more heavily weighted in the cross-validation sample. This finding becomes particularly meaningful when it is recalled that subjects' responses to the ATDP Scale were confounded by

the Social Desirability Scale in the initial sample, whereas in the second sample the Granofsky Pictures Test was so influenced. This suggests once again that when it was evident to the subjects what response would be considered the healthy or socially acceptable one to make, whether it be rating themselves or others, their responding was heavily influenced by this knowledge, thus interfering in some instances with what was intended to be measured by the various instruments. Again it must be noted, as in the initial sample, that authoritarianism was virtually unrelated to social desirability, and correlated significantly with both criterion instruments.

Thus, the set to respond to scale or questionnaire items in a socially desirable manner has been shown to interfere with the measurement of certain variables which were thought to be of importance in attitudes toward disability. It must follow from this finding that the hypotheses which were formulated with these variables as predictors were not given as fair a test as might have been possible had the responses to these respective instruments not been confounded with response biases. Although this influence was restricted to only two of the six predictors, both of the criterion instruments were shown to be subject to it at different times.

A final observation, based on the canonical loadings of the predictors in the two samples, is that a "field factor" and a "body factor" are to some degree of predictive importance in both samples. Although authoritarianism and the social desirability motive are the most heavily weighted variables in both analyses, some slight support is given to

those theoretical points of view which hold that the environmental context within which the individual functions and the complexity of feelings, ideation, and attitudes he harbors concerning his own somatic integrity are important determinants of his behavior in relation to physically disabled people. In the initial sample, field-independence was the third highest weighted variable, and body-satisfaction was fourth. In the cross-validation sample, body-concern was weighted third and social conformity fourth. Thus, in each instance a variable concerning the non-disabled individual's relation to his field, or environment, and his relation to his own body is weighted relatively heavily. This would suggest that these variables, while not appearing as important predictively as authoritarianism, may possess some validity as determinants of attitudes toward disability, and, therefore, warrant future investigation in this area of research.

It would seem desirable at this time to summarize what has been found, draw together the conclusions that have been made, and provide whatever recommendations for future research seem warranted.

It is felt that the major finding of the present study is that the degree of authoritarian tendencies present within the non-disabled individual was the best predictor of the kind of attitudes he possessed toward physically disabled persons. An inverse relationship was found between these two variables, so that it would be predicted that the more authoritarian the non-disabled individual, the more adverse and hostile would be his reaction to the disabled. In like manner, the less authoritarian the non-disabled individual, the more positive and acceptant of

disability he would be. By determining certain other personality characteristics of the non-disabled individual, it was possible in this study to predict the degree of authoritarianism he would be characterized by, and thus whether he would express positive or negative attitudes toward the disabled. When an individual was characterized by high ego-strength or low social conformity needs, he was found to be relatively low in authoritarian tendencies, and thus likely to express positive, accepting attitudes toward a disabled individual. Conversely, when an individual was characterized by low field-independence or moderate body-concern, he was predicted to be relatively high in authoritarianism, thus expressing negative attitudes toward the disabled.

It would follow from these findings that the interaction of non-disabled individuals with the disabled could most parsimoniously be conceptualized in terms of the reactions which many people have toward minority groups, such as Negroes or Jews. That is, it may be most accurate to view the disabled as a minority group, who represent in a very concrete, functional way the "weak" in our society, and who threaten those individuals who need to see themselves as members of the "strong" or influential segment of our culture. Those individuals who are not as power-oriented, socially conforming, or who are characterized by a high capacity for personal organization, and whose relationships are basically equalitarian rather than hierarchical, would not be predicted to be threatened by disabled people and thus would not be forced to respond in a defensive, aversive manner. These individuals would then be capable of responding in a warm, acceptant manner toward]

individuals with a visible disability.

Social conformity was found to be highly related to authoritarianism in this study, and like authoritarianism, was found to be inversely related to attitudes toward the disabled. It is felt that this variable was measuring to a lesser degree similar dynamics to those which were being measured by authoritarianism. Thus, individuals who would be considered highly conforming would be predicted to express negative attitudes toward disability, as they are also likely to be high in authoritarian tendencies. It was found that individuals would most likely be highly conforming, thus expressing negative attitudes, when they were characterized by medium field-independence.

None of the remaining four predictors (body-satisfaction, body-concern, field-independence, ego-strength) were found to relate to the criterion to any significant degree. The absence of significant findings with these variables could be attributed to two general possibilities:

1. The variables themselves were not related to the criterion.
2. The instruments were not adequate measures of the variables in question.

It was felt that the first possibility could account to some extent for the lack of findings with field-independence and ego-strength, and that body-satisfaction and ego-strength were vulnerable to the second possibility. The social desirability response set was seen as the major source of interference in the measuring of several of the variables, Barron's Ego-strength Scale and the Body-Cathexis Scale being particularly vulnerable to it. It was noted that this response bias received

a weighting second only to authoritarianism in both samples, suggesting that it was the primary determinant of any positive, "health" response in this study.

Evidence was presented which shows that the measures of the criterion were also confounded to some degree by this set, since the Attitudes Toward Disabled Persons Scale correlated significantly with it in the first sample, and the Granofsky Pictures test correlated significantly with it in the second sample. The relative weighting of the two measures in the two samples corresponds to this differential degree to which they correlated with social desirability in the samples. It is felt that this confounding of the criterion measures contributed to the significant correlations which were found to exist between the Ego-Strength Scale, the Body-Cathexis Scale, and the ATDP Scale.

Recommendations for future research in this area should include further investigation into the validity of viewing individuals with a physical disability as a minority group with similar stimulus value to that of Jews, Negroes, and other minorities. If future studies support this finding of the present study, which has previously been obtained by Chesler (1965), it would mean that a considerably body of information would be available for application to this specific problem. In any case, it would appear from the results of the present study that this is likely to be the most fruitful direction for research in this area to take.

It is also felt that future experimenters should not concern themselves with attempts to investigate the relevance of cultural dictates in determining attitudes toward disability, as this concept and its relevant implications seem to be included within the more workable,

meaningful concept of authoritarianism. Similarly, it is recommended that research attempting to relate ego-strength to attitudes toward the physically disabled be abandoned, as this concept has been shown to be poorly defined, nearly impossible to develop an adequate criterion for, and correspondingly difficult to measure. It would seem more fruitful to break this term down, if possible, into more measurable, meaningful parts, and attempt to relate these aspects of "ego-strength" to the criterion, than to continue to work with the present amorphous concept.

The variables of field-independence and body-feelings, would seem to warrant further study, as it was found that a "field variable" and a "body variable" were weighted reasonably highly in both samples. This finding occurred despite the fact that none of the three instruments in this study which are relevant to these findings (Chair-Window Test, Body-Cathexis Scale, and Homonym Test) were found to relate particularly well on their own to the criterion. Thus, future studies might best make use of different instruments in attempting to relate these variables to attitudes toward disability.

Finally, it would seem desirable in future studies to eliminate or control for the socially desirable response set as much as possible. This might be accomplished by utilizing "action tasks" rather than paper and pencil instruments in measuring the variables in question. If possible, this should be attempted with the measurement of subjects' attitudes toward disability unless the present instruments designed to measure this can be sufficiently improved.

CHAPTER IX

SUMMARY

A review of the literature revealed five basic theoretical approaches attempting to account for the negative attitudes which many non-disabled people possess toward individuals with a visible physical disability. Each of these approaches is represented by a personality construct which is considered to be important in determining how the non-disabled person will respond to the disabled. These constructs were: (1) Field-dependence, (2) Body-concern and satisfaction, (3) Ego-strength, (4) Authoritarianism, and (5) Social Conformity. Each of the constructs was represented in this study by a paper-and-pencil instrument which was considered an adequate measure of the variables in question. In addition, two instruments were used as measures of the criterion and one instrument was utilized as a measure of the social desirability response tendency.

The purpose of the study was to determine which of the five variables, or any combination of them, would best predict attitudes toward disability. Since it was felt that any attitude in reality is the result of the subtle interaction of many variables, rather than the function of a single one, particular emphasis was placed on the interactions of these variables in predicting the criterion.

On the basis of theory and previous research, it was possible to state initial hypotheses relating each of the five predictor variables

to the criterion. In testing these hypotheses on a sample of 150 college females, some measure of the relative predictive importance of the variables and of the degree to which they were interrelated could be obtained. More importantly, it was possible through the use of moderator variables to develop more refined, "interactive" hypotheses to be tested out on a second, somewhat smaller sample.

The finding which was consistently present in every aspect of the data was that authoritarianism was the most reliable predictor of attitudes toward disability, suggesting that this theoretical approach was the most valid of the five approaches that had been isolated and that this construct provided the most meaningful way of viewing relationships between disabled and non-disabled people. An inverse relationship was found to exist between this variable and the criterion, indicating that the highly authoritarian individual would respond in a more negative, aversive manner toward the disabled and that the less authoritarian individual would respond in a more acceptant, positive manner. Although the moderator analysis did not add significantly to these findings, it was possible through this method to predict the conditions most likely to result in either high or low authoritarianism.

The social desirability response set was found to be second in importance in predicting attitudes toward disability as it was the primary determinant of any positive, "healthy" response by the subject. It was felt that this response set was a confounding influence in the measurement of several of the variables, reflecting the inadequacy of the respective instruments in measuring what they purported to measure.

Recommendations for future research include further investigation into the feasibility of conceptualizing the disabled as a minority group subject to authoritarian attitudes, abandoning research having to do with such concepts as ego-strength, which this study would suggest cannot be meaningfully measured at this point, and the use of "action tests" in place of paper-and-pencil tests whenever this is possible.

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APPENDICES

APPENDIX A

LETTERS TO THE STUDENTS

Letter of Selection

Dear Student:

You have been selected to participate in a psychological experiment. This experiment is restricted to female members of the Psych 201 and 202 classes. As a member of one of these classes you are required to participate in experiments lasting a total of at least two hours. Since this experiment will be worth 2 hours of credit it will be a chance for you to satisfy that requirement.

We feel that this will be an interesting, enjoyable experience for you. There will be no shocks or other physical discomfort. There will be approximately 70 or 75 other students participating in a group with you. You will be asked to take a variety of paper-and-pencil tests, ranging from objective true-and-false questionnaires to projective techniques. Total time for the experiment will be approximately 2 hours.

You are scheduled for February_____, at 7:30 P.M. The testing will take place in _____. Thank you for your cooperation.

Sincerely,

John R. Barry, Ph.D.

Robert Noonan, M.A.

P.S. If you are unable to attend at the time indicated, please contact Mr. Noonan at the Med Center (Extension 5637).

Appendix A--ContinuedLetter of Explanation

Dear Student:

This letter is in regard to the psychology experiment that you were selected for and participated in on one of the four following evenings: February 23, February 28, March 2, March 16. As you may remember, the group that you participated with was informed by me that a letter would be sent to each participant after all the groups had been tested explaining the purpose and rationale of the experiment. That is the purpose of this letter.

As you may have guessed, the experiment was attempting to find relationships between various personality factors and attitudes toward physically disabled people. Basically, its purpose was to provide an answer for such questions as: "Why do some individuals react in a negative way toward disabled people (by rejecting them, avoiding them, seeing them as inferior, etc.) while others react positively toward them (by accepting them, seeing them as basically equal, including them in any relationship, etc.)?" Another way of putting this question would be: "What personality factors are important in determining whether a non-disabled person will react in a positive or negative way toward disabled people?"

The personality factors which were investigated by the various tests were: (1) Body-concern and satisfaction, (2) Conformity, (3) Authoritarianism (tendency to be prejudiced, moralistic, ethnocentric), (4) Ego-strength, (5) Field-dependency (tendency for one's behavior to be heavily dependent on, and determined by, the environmental context). The Pictures Test (to which you were instructed to write short stories), which many subjects had questions about, was the primary measure of attitudes toward the disabled.

Although this is necessarily a very superficial and brief explanation, it is hoped that it is of sufficient length and clarity to satisfy some of the curiosity that the experiment may have aroused.

Thank you very much for your participation in the experiment.

Sincerely,

Robert Noonan, M.A.

APPENDIX B

INSTRUCTIONS TO THE RATERS

The Granofsky Pictures Test represents an attempt to ascertain attitudes of non-disabled people toward those who are visibly disabled. The aim of this technique is to provide a medium through which subjects can express underlying trends regarding the disabled without being aware of the implications of their responses. As a means of enabling quantitative analysis of the material elicited by this technique, the negative and positive reactions have been placed on a single continuum so that each response can be scored numerically at some point on the following eight-point scale:

-5 -3 -1 $\pm$ +1 +3 +5 0

-5, -3, -1 represent three different degrees of strength of negative reactions toward the disabled, in which -5 indicates the extreme end of the negative side of the scale.

$\pm$ constitutes an ambivalent score, i.e., that the existing evidence from the response is too self contradictory to support the scoring of either a negative or positive alternative.

0 indicates a neutral score, i.e., that there is no evidence at all which may be considered as pertinent for scoring purposes. In particular, purely factual, colorless, or descriptive responses can more likely be taken as yielding no evidence--thus warranting an assignment of zero.

+1, +3, +5 represent three different degrees of strength of positive reactions toward the disabled, in which +5 indicates the extreme end of the positive side of the scale.

Differentiation of negative and positive attitudes.

It is evident that the assignment of either a minus or plus score indicates that the evaluator finds evidence in each response which clearly supports scoring in either a negative or positive alternative direction. In order to facilitate interpretive scoring of the content of the responses, descriptive criteria are provided below which constitute elements of typically negative attitudes as contrasted with typically positive attitudes. Both the negative and positive criteria can be illustrated in terms of three theoretical qualitative categories which serve to represent a convenient and logical grouping of the predominant aspects of attitudes toward the disabled. These categories are defined as follows:

1. An Evaluation Category--i.e., concepts of appraisal and estimation of disabled persons.
2. A Cognizance Category--i.e., reactions to the appearance of a disability.
3. A Social Interrelationships Category--i.e., concepts regarding the degree of social rapport with the disabled.

These categories are detailed below for both sides of the scale:

Negative Evaluation

Feelings of pity, and over-solicitousness toward the disabled. Regarding the disabled as objects of curiosity. Preconceived lower social status roles for the disabled. Over-estimation of psychological concomitants of a disability. Exaggeration and misconceptions regarding limitations set by an injury.

Positive Evaluation

Objective appraisal and realistic sympathetic evaluation of the disabled. Assessment of psychological concomitants of a disability in a practical way. Realistic estimation of limitations of a disability. Acceptance of the disabled on an equal social status footing with the non-disabled.

Negative Cognizance

Undue awareness and occupying one's self with the appearance of disability. Calling particular attention to the disability. Overestimation of unsightliness of a disability.

Positive Cognizance

De-emphasis of properties of disabilities, assignment of minor role to appearance of a disability.

Negative Social Interrelationships

Setting apart of the disabled from other people. Resistance or reluctance to admit them to participation in various kinds of social relationships. Feelings of uncomfortableness, uneasiness, and anxiety and embarrassment in the presence of the disabled.

Positive Social Interrelationships

Admittance of disabled to a variety of social interactions with the non-disabled. Expressions of feeling at ease in the presence of the disabled.

Extreme Weights.

Assignment of -5 or +5 indicated extremes in either polar direction. While such extremes may be expected to be rare, these weights are included to provide for those responses which furnish pertinent evidence warranting assignment to either of these scores. The guiding descriptions are as follows:

-5

Absolute rejection--expressions of ridicule, horror, hostility, repugnance. Isolation of the disabled as social outcasts.

+5

Admittance of the disabled to all varieties of social interactions with the none-disabled. More than mere tolerance--involves a deliberate and well considered approach to the problem of accepting the disabled.

In any case, in the interpretation of the responses and in the reduction of the material to the quantified scoring steps, the judges

are expected to rely heavily and necessarily upon the knowledge and insights which have accrued to them from their experience and training. The judges are advised, however, to read from five to ten responses from any one set of pictures or sentences in a preliminary fashion before proceeding with the application of the scoring scheme in order to become acquainted with the nature of the content. Then, taking into account the differentiating aspects of negative or positive attitudes described above, and keeping in mind that it is necessary not to take the responses at face value but rather to go beyond the literal meaning of the responses to look for deeper dynamic sources, the judges are requested to set an absolute standard for each set of responses in order to insure consistent, unidimensional evaluation of the expressed attitudes.

APPENDIX C

INTER-RATER RELIABILITY OF SCORING THE GRANOFKY PICTURES

FIRST SCORING SESSION

Item	Rater 1	Rater 2	Item	Rater 1	Rater 2
<u>Subject 1</u>			<u>Subject 4</u>		
1	6	4	1	2	2
2	8	8	2	5	2
3	6	2	3	6	4
4	6	4	4	2	2
5	8	6	5	5	4
6	8	6	6	6	4
7	5	5	7	2	2
8	6	8	8	8	8
9	4	4	9	0	0
10	6	6	10	2	2
11	8	6	11	10	8
12	6	4	12	2	2
<u>Subject 2</u>			<u>Subject 5</u>		
1	2	4	1	4	4
2	4	6	2	5	5
3	2	2	3	5	5
4	2	2	4	4	0
5	2	4	5	4	4
6	4	6	6	6	6
7	2	4	7	2	4
8	6	6	8	4	2
9	6	2	9	4	4
10	6	6	10	8	6
11	4	8	11	8	6
12	8	6	12	5	6
<u>Subject 3</u>			<u>Subject 6</u>		
1	2	4	1	2	4
2	4	4	2	5	5
3	0	6	3	4	4
4	2	0	4	0	0
5	4	5	5	2	4
6	2	4	6	2	2
7	4	2	7	5	5
8	6	6	8	6	4
9	2	2	9	6	6
10	4	2	10	2	4
11	4	4	11	5	2
12	5	2	12	2	0

APPENDIX C—Continued

Item	Rater 1	Rater 2	Item	Rater 1	Rater 2
<u>Subject 7</u>			<u>Subject 10</u>		
1	6	8	1	5	5
2	4	4	2	6	10
3	5	4	3	6	6
4	0	2	4	6	8
5	2	2	5	6	10
6	2	0	6	8	10
7	0	0	7	5	5
8	4	4	8	10	10
9	2	2	9	8	8
10	2	2	10	5	5
11	4	6	11	4	10
12	5	6	12	8	8
<u>Subject 8</u>			<u>Subject 11</u>		
1	4	6	1	0	6
2	6	8	2	5	5
3	5	5	3	6	6
4	6	6	4	0	2
5	5	2	5	5	4
6	6	8	6	2	8
7	4	2	7	5	5
8	8	8	8	6	5
9	8	6	9	2	0
10	5	4	10	8	8
11	10	10	11	8	10
12	6	6	12	8	10
<u>Subject 9</u>			<u>Subject 12</u>		
1	2	4	1	5	6
2	5	6	2	5	5
3	6	10	3	5	4
4	2	2	4	5	4
5	2	0	5	2	2
6	0	6	6	8	8
7	4	2	7	4	0
8	5	2	8	6	8
9	6	6	9	2	2
10	4	6	10	6	5
11	6	8	11	4	2
12	5	6	12	4	4

APPENDIX C—Continued

Item	Rater 1	Rater 2	Item	Rater 1	Rater 2
<u>Subject 13</u>			<u>Subject 15</u>		
1	6	5	1	5	10
2	5	5	2	8	8
3	5	5	3	8	8
4	8	8	4	6	6
5	6	6	5	4	4
6	5	6	6	6	6
7	4	4	7	5	5
8	6	8	8	8	8
9	4	4	9	5	5
10	5	6	10	6	6
11	6	10	11	4	5
12	5	4	12	10	8
<u>Subject 14</u>					
1	0	2			
2	4	2			
3	4	4			
4	2	0			
5	2	0			
6	2	2			
7	4	2			
8	4	0			
9	0	0			
10	2	0			
11	2	2			
12	2	4			

APPENDIX C—Continued

SECOND SCORING SESSION

Item	Rater 1	Rater 2	Item	Rater 1	Rater 2
<u>Subject 1</u>			<u>Subject 4</u>		
1	8	6	1	6	4
2	5	5	2	5	5
3	6	6	3	5	5
4	6	6	4	6	6
5	6	5	5	5	6
6	10	8	6	4	6
7	6	6	7	5	5
8	8	8	8	6	6
9	8	6	9	2	2
10	8	6	10	4	4
11	5	6	11	8	10
12	10	8	12	6	6
<u>Subject 2</u>			<u>Subject 5</u>		
1	5	6	1	6	8
2	5	5	2	5	5
3	5	5	3	5	5
4	6	10	4	8	6
5	5	4	5	2	4
6	5	6	6	5	5
7	5	5	7	5	5
8	6	6	8	6	6
9	4	2	9	6	5
10	5	5	10	6	6
11	6	6	11	5	6
12	5	6	12	8	8
<u>Subject 3</u>			<u>Subject 6</u>		
1	8	8	1	8	6
2	4	4	2	5	4
3	5	5	3	4	4
4	6	6	4	8	8
5	6	6	5	2	4
6	10	10	6	6	8
7	5	5	7	2	2
8	6	6	8	6	6
9	6	6	9	5	6
10	6	8	10	6	6
11	8	6	11	8	8
12	5	4	12	8	6

APPENDIX C—Continued

Item	Rater 1	Rater 2	Item	Rater 1	Rater 2
<u>Subject 7</u>			<u>Subject 10</u>		
1	5	6	1	4	6
2	5	5	2	6	6
3	6	6	3	4	2
4	2	0	4	5	6
5	2	0	5	5	6
6	10	8	6	4	0
7	5	2	7	4	2
8	6	6	8	6	6
9	4	2	9	0	2
10	6	5	10	6	6
11	8	6	11	8	8
12	6	6	12	4	6
<u>Subject 8</u>			<u>Subject 11</u>		
1	5	6	1	5	6
2	2	2	2	5	5
3	4	4	3	5	5
4	2	5	4	6	2
5	5	6	5	8	8
6	8	8	6	5	4
7	2	2	7	6	6
8	2	6	8	6	8
9	2	2	9	8	8
10	6	6	10	5	5
11	8	8	11	8	8
12	2	2	12	8	8
<u>Subject 9</u>			<u>Subject 12</u>		
1	0	2	1	5	6
2	4	4	2	5	5
3	4	2	3	6	8
4	2	0	4	4	2
5	0	2	5	8	6
6	2	2	6	8	8
7	4	4	7	5	5
8	2	2	8	6	6
9	0	2	9	5	4
10	2	0	10	6	6
11	6	5	11	6	6
12	2	2	12	5	5

APPENDIX C—Continued

Item	Rater 1	Rater 2	Item	Rater 1	Rater 2
<u>Subject 13</u>			<u>Subject 15</u>		
1	5	5	1	4	6
2	5	5	2	2	4
3	2	5	3	5	5
4	4	2	4	4	2
5	4	4	5	2	4
6	5	0	6	2	5
7	4	4	7	5	5
8	5	4	8	5	6
9	4	4	9	2	2
10	4	4	10	6	4
11	8	6	11	5	8
12	4	5	12	6	6
<u>Subject 14</u>					
1	4	4			
2	8	6			
3	2	5			
4	6	8			
5	0	2			
6	8	8			
7	8	10			
8	6	8			
9	2	2			
10	4	4			
11	6	6			
12	2	5			

APPENDIX C—Continued

FINAL SCORING SESSION

Rater 1	Rater 2	Rater 1	Rater 2	Rater 1	Rater 2
<u>Item 1</u>		<u>Item 5</u>		<u>Item 9</u>	
4	2	2	4	4	4
6	8	2	2	6	6
5	5	6	6		
2	4				
<u>Item 2</u>		<u>Item 6</u>		<u>Item 10</u>	
8	8	6	8	6	6
5	5	6	8	2	0
2	5			6	2
				6	6
<u>Item 3</u>		<u>Item 7</u>		<u>Item 11</u>	
5	5	4	2	6	6
8	8	5	5	8	10
6	6	5	5	6	6
				8	8
				2	2
<u>Item 4</u>		<u>Item 8</u>		<u>Item 12</u>	
3	3	6	6	0	0
3	0	2	2	5	5
6	8	8	10	4	2
5	5	5	6		

APPENDIX D

MODERATOR CORRELATIONS FOR THE CROSS-VALIDATION SAMPLE

CORRELATIONS BETWEEN FIELD-INDEPENDENCE AND ATTITUDES TOWARD DISABILITY

	Overall Correlations	Moderator					
		1 Social Conformity (SC)**	2 Authori- tarianism (A)	3 Ego- Strength (ES)	4 Body- Satisfaction (BS)	5 Body- Concern (BC)	6 Social Desirability (SD)
ATDP	.02						
High		-.15	-.21	.26	.19	-.05	-.09
Medium		-.22	.22	-.13	-.42*	.06	.18
Low		.40*	-.07	-.13	.08	-.03	-.01
Granofsky	.13						
High		.01	.17	.24	.28	.17	-.20
Medium		.19	.17	-.14	-.21	.10	.27
Low		.15	-.03	.25	.28	.10	.28

*p < .05

**The subgroup correlations in all tables in this appendix are based on an N of 30.

APPENDIX D—Continued

CORRELATIONS BETWEEN SOCIAL CONFORMITY AND ATTITUDES TOWARD DISABILITY

		Moderator					
		1	2	3	4	5	6
		Field- Independence (FI)	Authori- tarianism (A)	Ego- Strength (ES)	Body- Satisfaction (BS)	Body- Concern (BC)	Social Desirability (SD)
Overall	Correlations						
	Independence						
	(FI)						
ATDP	High	-.55**	-.01	-.58**	-.35*	-.45*	-.22
	Medium	-.42*	-.12	-.02	.02	-.44*	-.39*
	Low	.08	-.30	.06	-.29	.13	-.11
Granofsky	High	-.25	-.21	-.45*	-.24	-.07	-.15
	Medium	-.06	.23	.12	-.19	.13	-.14
	Low	-.28	-.39*	-.09	-.17	-.37*	-.25

*p < .05

**p < .01

APPENDIX D—Continued

CORRELATIONS BETWEEN AUTHORITARIANISM AND ATTITUDES TOWARD DISABILITY

	Moderator					
	1	2	3	4	5	6
Overall	Field- Independence (FI)	Social Conformity (SC)	Ego- Strength (ES)	Body- Satisfaction (BS)	Body- Concern (BC)	Social Desirability (SD)
Correlations						
ATDP	-.32*					
High	-.40*	-.03	-.51**	-.40*	-.49**	-.19
Medium	-.56**	-.41*	-.26	.23	-.37*	-.59**
Low	-.05	-.43*	.02	-.55**	-.10	-.14
Granofsky	-.26*					
High	-.11	-.20	-.39*	-.26	-.28	-.23
Medium	-.19	-.10	-.22	-.05	-.06	-.29
Low	-.42*	-.31	-.13	-.45*	-.46*	-.26

*p < .05

**p < .01

APPENDIX D—Continued

CORRELATIONS BETWEEN SOCIAL DESIRABILITY AND ATTITUDES TOWARD DISABILITY

	Overall Correlations	Moderator					
		1 Field- Independence (FI)	2 Social Conformity (SC)	3 Authori- tarianism (A)	4 Ego- Strength (ES)	5 Body- Satisfaction (BS)	6 Body- Concern (BC)
ATDP	.12						
High		.02	-.02	.13	.03	.10	.12
Medium		.29	.31	.23	.09	.19	.15
Low		.05	.10	.20	.29	.09	-.02
Granofsky	.22*						
High		.15	.39*	.32	.29	.53**	-.01
Medium		-.10	-.06	.01	.29	.14	.33
Low		-.38*	.20	.33	.02	.05	.24

*p < .05

**p < .01

APPENDIX D—Continued

CORRELATIONS BETWEEN BODY-CONCERN AND ATTITUDES TOWARD DISABILITY

		Moderator					
Overall Correlations		1	2	3	4	5	6
		Field- Independence (FI)	Social Conformity (SC)	Authori- tarianism (A)	Ego- Strength (ES)	Body- Satisfaction (BS)	Social Desirability (SD)
ATDP	-.08						
High		-.24	-.19	-.24	-.11	-.37*	-.06
Medium		-.01	.01	-.05	-.13	-.04	-.03
Low		-.01	-.10	.01	.01	.07	-.10
Granofsky	-.18						
High		-.17	.11	-.13	-.31	-.25	-.60**
Medium		-.30	-.39*	-.30	-.38*	-.36*	.24
Low		-.19	-.33	-.15	.04	.01	-.09

* $p < .05$ ** $p < .01$

CORRELATIONS BETWEEN BODY-SATISFACTION AND ATTITUDES TOWARD DISABILITY

	Overall Correlations	Moderator					
		1 Field- Independence (FI)	2 Social Conformity (SC)	3 Authori- tarianism (A)	4 Ego- Strength (ES)	5 Body- Concern (BC)	6 Social Desirability (SD)
ATDP	-.08						
High		.11	-.21	-.16	-.11	-.40*	-.14
Medium		-.16	.15	-.19	-.06	-.26	-.25
Low		-.21	-.03	.09	-.19	.34	.03
Granofsky	-.07						
High		.24	-.21	-.10	-.34	-.18	.15
Medium		-.23	.09	.21	-.01	.01	.03
Low		-.29	.07	-.19	.06	-.02	-.36*

*p < .05

APPENDIX D—Continued

CORRELATIONS BETWEEN EGO-STRENGTH AND ATTITUDES TOWARD DISABILITY

		Moderator					
		1	2	3	4	5	6
		Field- Independence (FI)	Social Conformity (SC)	Authori- tarianism (A)	Body- Satisfaction (BS)	Body- Concern (BC)	Social Desirability (SD)
Overall							
Correlations							

*p < .05

**p < .01

BIOGRAPHICAL SKETCH

John Robert Noonan, Jr. was born in Louisville, Kentucky on August 14, 1940. He attended high school and college in Louisville, graduating from Flaget Memorial High School in June, 1958, and receiving the degree of Bachelor of Arts from Bellarmine College in June, 1962. He entered the University of Florida graduate program in psychology in September, 1962. On entering, he was awarded a U. S. Public Health Service Fellowship which he held through June, 1964. In August, 1964, he received the degree of Master of Arts. From September, 1964 until the present time he has pursued his work toward the degree of Doctor of Philosophy. This latter period includes his working as a graduate assistant from September, 1964, until August, 1965, at the Rehabilitation Research Institute and his internship in Clinical Psychology at the J. Hillis Miller Health Center from September, 1965, until August, 1966.

John Robert Noonan, Jr. is married to the former Doxie Zimmermann. He is a member of Psi Chi and the American Psychological Association.

This dissertation was prepared under the direction of the chairman of the candidate's supervisory committee and has been approved by all members of that committee. It was submitted to the Dean of the College of Arts and Sciences and to the Graduate Council, and was approved as partial fulfillment of the requirements for the degree of Doctor of Philosophy.

December 17, 1966

Ernest Jones
Dean, College of Arts and Sciences

Dean, Graduate School

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2

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